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PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

1944

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

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DOCUMENTS SECTION

Harrisburg, Pennsylvania
April 5, 1945

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Engineering

Harrisburg, Pennsylvania
April 5, 1945

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1944.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1944, the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	69	Telephone	229
Street Railways	17	Sewerage	16
Pipe Lines	6	Canal	2
Ferries	16	Wharfage	3
Express	1	Bridge (Toll)	11
Common Carriers by Water	7	Telegraph	2
Bus--Scheduled Service	407	Steam Heat	30
Taxi--Call and Demand	439	Stock Yards	3
Bus--Group and Party	206	Airways	4
Truck--Common Carriers	7,107	Incline Plane	3
Electric	52	Grain Elevator	3
Gas	134	Refrigeration	1
Water	481		

Total - 9,249

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 858 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages, summarized on page 15, will show that in 1944 there was an increase in casualty accidents involving steam railroads and motor transportation as compared with the previous year, whereas accidents involving street railways decreased. The record of accidents for the year 1944 is most unusual in that the total number of accidents of all utilities was the same as in 1943.

Fatalities were reduced from 617 in 1943 to 507 in 1944, or nearly 18%. Despite the minor increase in steam railroad accidents in 1944 as compared with the previous year, 100 less persons were killed in 1944.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

Guy R. Johnson

Guy R. Johnson
Director of Bureau

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	3,695	307	3,637	32.41	60.55	27.23
Street Railway	4,942	96	6,086	43.34	18.94	45.56
Motor Transportation	2,011	63	2,904	17.64	12.43	21.74
Electric	418	22	408	3.67	4.34	3.05
Gas	149	12	142	1.31	2.37	1.06
Water	66	2	65	0.58	0.39	0.49
Telephone & Telegraph	103	2	101	0.90	0.39	0.76
Other Utilities	17	3	14	0.15	0.59	0.11
TOTAL	11,401	507	13,357	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANS-PORTA-TION		ELECTRIC		GAS		WATER		TELE-PHONE AND TELE-GRAPH		OTHER UTILI-TIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	120	2899	[illegible]	[illegible]	[illegible]	126	10	389	3	119	1	63	2	85		13	146	4094	28.80	30.65
Trespasser	111	70	9	23	2	4		1		2	1			1	1		124	101	24.46	0.76
Other	10	91		36	1	18	9	15		8		2		5	1	1	21	176	4.14	1.32
Passenger, Patron or Consumer	6	380	13	3812	7	1801	3	3	9	13				10	1		39	6019	7.69	45.06
Pedestrian	14	4	44	643	34	354											92	1001	18.15	7.49
Occupant Other Vehicle	46	193	24	1172	15	601											85	1966	16.76	14.72
TOTAL	307	3637	96	6086	63	2904	22	408	12	142	2	65	2	101	3	14	507	13357		
Per Cent Killed	60.55		18.94		12.43		4.34		2.37		0.39		0.39		0.59				100.00	
Per Cent Injured		27.23		45.56		21.74		3.05		1.06		0.49		0.76		0.11				100.00

K - Killed
I - Injured

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		*OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
165	Grade Crossings (for details-see appendix)	1	6					60	197	61	203	19.86	5.58
47	Collisions	7	69		18				15	7	102	2.29	2.80
31	Derailments	10	37		10				10	10	57	3.26	1.57
112	At station or loading platforms		27		75		1		9		112		3.08
18	Defect or failure of roadway or equipment		19		2						21		0.58
101	Operating switches.		101								101		2.78
100	Struck overhead or side obstruction	11	88						1	11	89	3.58	2.45
208	Repairing track or roadbed		209								209		5.75
159	Struck by flying missile, glass, etc.		138		19				2		159		4.37
125	Coupling or uncoupling	7	118							7	118	2.28	3.24
101	Falling on locomotive or car	1	80		19		1			1	100	0.33	2.75
325	Falling from locomotive or car	17	262	4	25	3	9		8	24	304	7.82	8.36
612	Getting on or off locomotive or car	2	438	1	147	3	11		10	6	606	1.95	16.66
302	Struck by locomotive or car	52	83	1	8	100	40	9	13	162	144	52.77	3.96
164	Operating hand brakes	1	163							1	163	0.33	4.48
545	Sudden starting or stopping of trains	4	531		24		2	1	19	5	576	1.63	15.84
5	Coming in contact with catenary wire	1	1			1	2			2	3	0.65	0.08
184	On or about locomotive		184								184		5.06
391	Miscellaneous	6	345		33	4	4		4	10	386	3.25	10.61
3695	TOTAL	120	2899	6	380	111	70	70	288	307	3637		
	Per Cent Killed	39.09		1.95		36.16		22.80				100.00	
	Per Cent Injured	79.71		10.45		1.92		7.92				100.00	

*"Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed
I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE
COLLISIONS:				
MAIN TRACK	95			+ 9.20
YARD TRACK	552	647	29.50	- 8.61
DERAILMENTS:				
MAIN TRACK	601			+ 1.35
YARD TRACK	538	1,139	51.94	+12.32
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		347	15.82	+ 0.58
MISCELLANEOUS		60	2.74	-12.68
TOTAL		2,193	100.00	+ 0.64

Note: 704 of the 1,139 Derailments (61.8%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

STEAM RAILROADS
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1942	1,891	+30.14	$1,661,762	+35.1[illegible]
1943	2,179	+15.23	2,003,125	+ 7.59
1944	2,193	+ 0.64	1,915,607	- 4.37

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE
	1942	1943	1944		1942	1943	1944	
EMPLOYEES	102	95	120	+ 26.32%	[illegible]	[illegible]	[illegible]	+ [illegible]
PASSENGERS	7	21	5	- 52.38%	[illegible]	52	[illegible]	- [illegible]
TRESPASSERS	154	151	111	- 26.49%	[illegible]	75	70	- [illegible]
OTHERS **	95	80	70	- 12.50%	514	259	288	+ [illegible]
TOTAL	358	407	307	- 24.57%	2,780	2,678	2,6[illegible]	- 1.1[illegible]

* Comparison of 1944 with 1943
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT KILLED	PER CENT INJURED
Road Enginemen	6	73	5.00	2.52
Road Firemen	10	200	8.34	6.90
Road Conductors	9	185	7.50	6.38
Road Brakemen	16	525	13.33	18.11
Road Flagmen	2	59	1.67	2.03
Road Baggagemen		9		0.31
Yard Enginemen and Firemen	4	107	3.33	3.69
Yard Brakemen and Conductors	36	1,192	30.00	41.12
Yard Switch Tenders	1	15	0.83	0.52
Crossing Watchmen		4		0.14
Track Walkers	3	1	2.50	0.03
Sectionmen and Work Train Laborers	11	241	9.17	8.31
Signalmen and Signal Maintainers	3	17	2.50	0.59
Station Baggagemen		9		0.31
Car Cleaners		6		0.21
Car Inspectors	2	8	1.67	0.28
Car Repairmen	5	16	4.17	0.55
Carpenters	1	9	0.83	0.31
Dining Car Employees		149		5.14
Miscellaneous	8	50	6.66	1.72
Employees Not on Duty	3	24	2.50	0.83
TOTAL	120	2,899	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21											3	0.56
21 - 30		1	1.27	2	53	26.19		4	2.06	1	121	22.55
31 - 40		3	3.80	5	78	39.52	1	8	4.64	5	161	30.68
41 - 50		26	32.91	3	51	25.71	3	37	20.62	6	145	27.91
51 - 60	6	24	37.97		16	7.62	3	92	48.97	3	69	13.31
61		2	2.53					7	3.61		4	0.74
62		4	5.06					7	3.61		5	0.92
63		5	6.33		1	0.48	1	8	4.64			
64							1	5	3.09		7	1.29
65		4	5.06					10	5.15		2	0.37
Over 65		3	3.80		1	0.48		6	3.09		3	0.56
Not Reported		1	1.27					1	0.52	1	5	1.11
Total	6	73	100.00	10	200	100.00	9	185	100.00	16	525	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					1	0.90		14	1.14		18	0.74
21 - 30		12	19.67		20	18.02	6	336	27.85	9	547	22.94
31 - 40		18	29.51	2	32	30.63	8	338	28.18	21	638	27.19
41 - 50		15	24.59	2	26	25.23	12	310	26.22	26	610	26.24
51 - 60	1	11	19.67		14	12.61	6	145	12.30	19	371	16.09
61		1	1.64		1	0.90		9	0.73		24	0.99
62		1	1.64		4	3.60	2	10	0.98	2	31	1.36
63					2	1.80	1	5	0.49	2	21	0.95
64	1	1	3.28		1	0.90		7	0.57	2	21	0.95
65					1	0.90		1	0.08		18	0.74
Over 65					5	4.51	1	9	0.81	1	27	1.15
Not Reported								8	0.65	1	15	0.66
Total	2	59	100.00	4	107	100.00	36	1,192	100.00	83	2,341	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
165	Collision of cars	1	42	6	583								1	7	626	7.3	10.3
1206	Collision of car and vehicle	2	63	1	536		1	24	1165	1	18		18	28	1801	29.2	29.6
666	Struck by car	1	9	1	15	4	4			43	595		17	49	640	51.1	10.5
32	Derailment of car		5		95				2		6				108		1.8
16	Contact with overhead or side obst.		4		6		7								17		0.3
3	Contact with trolley or feed wire or third rail	1		1		1								3		3.1	
17	Emergency stop		4		14										18		0.3
102	Defect or failure of roadway or eqp.		26		82						7				115		1.9
329	Caught by doors		6		325						1				332		5.4
280	Boarding standing car		7		274										281		4.6
711	Alighting from car		21		691						1				713		11.7
787	Falling within car		21		774										795		13.1
17	Jumping on or off car while in motion		1	1	4	1	11							2	16	2.1	0.3
300	At elevated or subway platforms			3	299						1			3	300	3.1	4.9
28	Repair work on right of way	1	27											1	27	1.0	0.4
63	Struck by flying missile glass, etc.		19		40						1				60		1.0
230	Miscellaneous		145		74	3			5		13			3	237	3.1	3.9
4942	TOTAL	6	400	13	3812	9	23	24	1172	44	643		36	96	6086		
	Per Cent Killed	6.3		13.5		9.4		25.0		45.8						100.0	
	Per Cent Injured		6.6		62.6		0.4		19.2		10.6		0.6				100.0

K--Killed
I--Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

Class of Person	KILLED				INJURED			
	YEAR			COMPARISON OF 1944 WITH 1943	YEAR			COMPARISON OF 1944 WITH 1943
	1942	1943	1944		1942	1943	1944	
Employees	5	4	6	+ 50.00%	199	289	400	+ 38.41%
Passengers	16	12	13	+ 8.33%	3742	3983	3812	- 4.29%
Trespassers	12	12	9	- 25.00%	47	27	23	- 14.81%
Occupants of other Vehicles	27	13	24	+ 84.62%	1357	1139	1172	+ 2.90%
Pedestrians	40	52	44	- 15.38%	575	755	643	- 14.83%
Others		1		- 100.00%	82	71	36	- 49.30%
TOTAL	100	94	96	+ 2.13%	6002	6264	6086	- 2.84%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EM-PLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
743	Collision with other Vehicle	2	76	1	731				5	15	500		8	18	1386	28.6	47.7
68	Collision with fixed object	1	13	2	199	1			4		8			4	224	6.3	7.7
257	Struck by auto-bus, taxicab or truck		2	1	7			22	217		11	1	7	24	244	38.1	8.4
130	Running or walking into side of auto-bus, taxicab or truck							10	119				1	10	120	15.9	4.1
318	Boarding or alighting (Standing Vehicle)		2	1	317									1	319	1.6	11.0
128	Falling within vehicle				132										132		4.6
102	Caught by vehicle doors				100								2		102		3.5
21	Jumping on or off vehicle in motion			2	14	1	4		1					3	19	4.7	0.6
107	Sudden stop of vehicle		1	[illegible]	127				1						129		4.4
44	Defect or failure of equipment		11		75			2	4		3			2	93	3.2	3.2
20	Vehicle skidded		3		36				2		1				42		1.5
15	Highway defect		3		18										21		0.7
4	Apparent reckless operation of vehicle				8						8				16		0.6
54	Miscellaneous	1	15		37				1		4			1	57	1.6	2.0
2011	TOTAL	4	126	7	1801	2	4	34	354	15	601	1	18	63	2904		
	Per Cent Killed	6.3		11.1		3.2		54.0		23.8		1.6				100.0	
	Per Cent Injured		4.3		62.0		0.2		12.2		20.7		[illegible]				100.0

K - Killed
I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	NUMBER OF ACCIDENTS (NON CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	439	602	13	799	270	$ 73,174.16
Schedule Route (Bus Service)	407	1,281	26	1,922	372	178,922.14
Group and Party (Bus Service)	206	-	-	-	-	-
Freight & Merchandise (Truck)	7,107	98	15	147	98	93,542.87
Contract Carrier (Persons and Property)	858	30	9	36	30	31,069.96
TOTAL	9,017	2,011	63	2,904	770	$376,709.13

Note: See Appendix - Tables I - X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1942	11,814	2,589	+14.96%	80	+63.27%	2,896	+27.80%	$340,955.91	+12.86%
1943	9,551	2,516	- 2.82%	63	-21.25%	2,826	- 2.41%	376,910.17	+10.54%
1944	9,017	2,781	+10.53%	63	-	2,904	+ 2.76%	376,709.13	- 0.06%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
29	Electric - Contact with charged wires or equipment	6	15			5	7			11	22	26.8	3.0
200	Falling - (other than into water)	2	180				9		9	2	198	4.9	27.1
163	Striking against or struck by objects	5	155				4			5	159	12.2	21.8
109	Handling materials		109								109		14.9
7	Defect or failure of equipment or machinery		5						2		7		1.0
40	Involving use of tools - no defect		40								40		5.5
30	Automobile accident	2	18		1	1	7	1		4	26	9.8	3.6
	Failure to use protective devices provided												
33	Burns - not from electric source		26			2			4	2	32	4.9	4.4
11	Explosion		1		2		3		7		13		1.8
3	Drowning			2		2				4		9.8	
15	Asphyxiation		9					12	3	12	12	29.2	1.6
28	Infection from minor wounds		28								28		3.8
85	Miscellaneous	1	81		1		1		1	1	84	2.4	11.5
753	TOTAL	16	669	2	4	10	31	13	26	41	730		
	Per Cent Killed	39.0		4.9		24.4		31.7				100.0	
	Per Cent Injured		91.7		0.5		4.2		3.6				100.0

K - Killed
I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1944 WITH 1943	YEAR			COMPARISON OF 1944 WITH 1943
	1942	1943	1944		1942	1943	1944	
EMPLOYEES	15	17	16	- 5.88%	739	641	669	+ [illegible]
TRESPASSERS	7	7	2	-71.43%	5	3	4	+ [illegible]
OTHERS	22	14	10	-28.57%	63	40	31	- [illegible]
PATRONS OR CONSUMERS	29	15	13	-13.33%	25	26	26	-
TOTAL	73	53	41	-22.64%	832	710	730	+ 2.82%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
28	Electric - Contact with charged wires or equipment	6	13			5	7			11	20	50.0	4.9
96	Falling - (other than into water)	1	91				3		1	1	95	4.6	23.3
98	Striking against or struck by objects	3	94				2			3	96	13.6	23.5
61	Handling materials		61								61		14.9
4	Defect or failure of equipment or machinery		4								4		1.0
24	Involving use of tools-no defect		24								24		5.9
8	Automobile accident		5				3				8		2.0
	Failure to use protective devices provided												
21	Burns-not from electric source		20			2				2	20	9.1	4.9
1	Explosion		1								1		0.2
1	Drowning					2				2		9.1	
7	Asphyxiation		8					3	2	3	10	13.6	2.5
22	Infection from minor wounds		22								22		5.4
47	Miscellaneous		46		1						47		11.5
418	TOTAL	10	389		1	9	15	3	3	22	408		
	Per Cent Killed	45.5				40.9		13.6				100.0	
	Per Cent Injured		95.3		0.2		3.7		0.8				100.0

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1942	14	424	4	3	15	30	3	3	36	460
1943	14	364	2	1	13	24	2	7	31	396
1944	10	389		1	9	15	3	5	22	408

K - Killed
I - Injured

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wire or equipment												
35	Falling - (other than into water)		31				3		1		35		24.7
24	Striking against or struck by objects	1	22				1			1	23	8.3	16.2
25	Handling materials		25								25		17.6
1	Defect or failure of equipment or machinery		1								1		0.7
7	Involving use of tools - no defect		7								7		4.9
7	Automobile accident	1	5				1			1	6	8.3	4.2
	Failure to use protective devices provided												
9	Burns - not from electric source		5						4		9		6.3
10	Explosion				2		3		7		12		8.5
	Drowning												
7	Asphyxiation							9	1	9	1	75.0	0.7
2	Infection from minor wounds		2								2		1.4
22	Miscellaneous	1	21							1	21	8.4	14.8
149	TOTAL	3	119		2		8	9	13	12	142		
	Per Cent Killed	25.0						75.0				100.0	
	Per Cent Injured		83.8		1.4		5.6		9.2				100.0

K - Killed
I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1942	1	108			5	10	26	20	32	138
1943		107		1	1	3	13	18	14	129
194[illegible]	3	119		2		8	9	13	12	142

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Electric - Contact with charged wires or equipment		2								2		3.1
11	Falling - (other than into water)		9				2				11		16.9
16	Striking against or struck by objects		16								16		24.6
14	Handling materials		14								14		21.6
	Defect or failure of equipment or machinery												
4	Involving use of tools - no defect		4								4		6.2
6	Automobile accident	1	5							1	5	50.0	7.7
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		1.5
	Explosion												
1	Drowning			1						1		50.0	
1	Asphyxiation		1								1		1.5
3	Infection from minor wounds		3								3		4.6
8	Miscellaneous		8								8		12.3
66	TOTAL	1	63	1			2			2	65		
	Per Cent Killed	50.0		50.0								100.0	
	Per Cent Injured		96.9				3.1						100.0

K - Killed
I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1942		73				1				74
1943		51	2						2	51
1944	1	63	1			2			2	65

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
55	Falling - (Other than into water)	1	47						7	1	54	50.0	53.5
21	Striking against or struck by objects	1	19				1			1	20	50.0	19.8
7	Handling materials		7								7		6.9
2	Defect or failure of equipment or machinery								2		2		2.0
3	Involving use of tools - no defect		3								3		3.0
7	Automobile accident		3		1		3				7		6.9
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		1.0
	Explosion												
	Drowning												
	Asphyxiation												
1	Infection from minor wounds		1								1		1.0
6	Miscellaneous		4				1		1		6		5.9
103	TOTAL	2	85		1		5		10	2	101		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		84.2		1.0		4.9		9.9				100.0

K - Killed
I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1942		113		1	1	20		2	1	136
1943	3	98		1		13		1	3	113
1944	2	85		1		5		10	2	101

TABLE NO. 24 - ACCIDENTS INVOLVING * OTHER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
3	Falling - (other than into water)		2				1				3		21.4
4	Striking aginst or struck by objects		4								4		28.6
2	Handling materials		2								2		14.3
	Defect or failure of equipment or machinery												
2	Involving use of tools - no defect		2								2		14.3
2	Automobile accident					1		1		2		66.7	
	Failure to use protective devices provided												
1	Burns - not from electric source		1								1		7.1
	Explosion												
1	Drowning			1						1		33.3	
	Asphyxiation												
	Infection from minor wounds												
2	Miscellaneous		2								2		14.3
17	TOTAL		13	1		1	1	1		3	14		
	Per Cent Killed			33.3		33.3		33.4				100.0	
	Per Cent Injured		92.9				7.1						100.0

K - KILLED
I - INJURED

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING * OTHER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1942		21	3	1	1	2			4	24
1943		21	3						3	21
1944		13	1		1	1	1		3	14

* Other utilities as herein used consist of: Bridge, Canal, Pipe Line and Steam Heating.

TABLE [illegible] 26 - SUMMARY OF ALL UTILITY ACCIDENTS [illegible] CHARLESTON
COMPARISON OF ACCIDENTS 1942 TO 1944

CLASS OF UTILITY	ACCIDENTS YEAR 1942	ACCIDENTS YEAR 1943	ACCIDENTS YEAR 1944	ACCIDENTS COMPARISON OF 1944 [illegible] 1943	KILLED YEAR 1942	KILLED YEAR 1943	KILLED YEAR 1944	KILLED COMPARISON OF 1944 [illegible] 1943	INJURED YEAR 1942	INJURED YEAR 1943	INJURED YEAR 1944	INJURED COMPARISON OF 1944 [illegible] 1943
Steam Railroad	3916	3[illegible]	3[illegible]	/ [illegible]	[illegible]	[illegible]	307	-21.57%	2[illegible]	[illegible]	3[illegible]	- 1.1[illegible]
Street Railway	4977	5135	4912	- 5.7[illegible]	100	94	9[illegible]	/ 2.13%	6602	6264	6[illegible]	- 2.84%
Motor Transportation	1998	1936	2011	/ 3.87%	80	63	63	-	2891	2826	2904	/ 2.76%
Electric	481	409	41[illegible]	/ 2.20%	3[illegible]	31	[illegible]	-3[illegible].13%	400	3[illegible]	40[illegible]	/ 3.03%
Gas	156	138	14[illegible]	/ 7.97%	32	14	1[illegible]	-14.50%	136	129	142	/1[illegible].08%
Water	73	55	[illegible]	/24.53%	-	3	2	-	74	51	[illegible]	/27.45%
Telephone Telegraph	135	114	103	- 9.55%	1	[illegible]	2	-33.33%	156	113	[illegible]	-10.[illegible]
Other Utilities	27	21	17	-28.17%	4	5	5	-	24	21	14	-33.33%
TOTAL	10[illegible]	11401	11401	-	611	617	5[illegible]	-1[illegible].88%	12510	13475	13357	- [illegible].30%

APPENDIX
- 1944 -
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2166	19.59
Protected by trainmen	1439	13.01
Total Protected	3605	32.60
Unprotected	7453	67.40
TOTAL CROSSINGS	11,058	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	505	14.0
Watchmen	346	9.6
Flashing light signals	1147	31.8
Other visual signals	27	0.7
Bells	141	3.9
Trainmen	1439	40.0
TOTAL	3605	100.0

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	200	56		3	6	2	206	61	267	46.52
Protected by gates	24	7		5			24	12	36	6.27
Protected by watchmen	29	7		5		1	29	13	42	7.32
Protected by bells	8	4					8	4	12	2.09
Protected by visual signals	120	36		4	1	1	121	41	162	28.22
Protected by trainmen	40	8			6	1	46	9	55	9.58
Total Accidents at Protected Crossings	221	62		14	7	3	228	79	307	53.46
Total Accidents-Non-Casualty	421				13		434			75.61
Total Accidents-Casualty		118		17		5		140		24.39
TOTAL ACCIDENTS	539		17		18				574	100.00
Per Cent of Total Accidents	93.90		2.96		3.14				100.00	

NC - Non-Casualty
C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS OF STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K and I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	22	77	3			2	25	79	104	44.83
Protected by gates	2	5	2	5			4	8	12	5.17
Protected by watchmen	4	7	4	1		1	8	9	17	7.33
Protected by bells	4	3					4	3	7	3.02
Protected by visual signals	6	41	5			9	11	50	61	26.29
Protected by trainmen	1	7				23	1	30	31	13.36
TOTAL	39	140	14	4		35	53	179	232	100.00
Killed and injured at protected crossings	17	63	11	4		33	28	100	128	55.17
Per Cent of total killed and injured	77.16		7.76		15.08					100.00

K - Killed
I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1942, 1943 and 1944

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Decrease	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Increase
*PROTECTED	1942	2160	32		39.1
	1943	2166	33		3.1
	1944	2166	27	18.2	
UNPROTECTED	1942	9054	42		15.6
	1943	8971	27	35.7	
	1944	8892	26	3.7	

			INJURED		
*PROTECTED	1942	2160	89	27.6	
	1943	2166	61	31.4	
	1944	2166	70		14.8
UNPROTECTED	1942	9054	135		40.6
	1943	8971	100	25.9	
	1944	8892	109		9.0

* Not including those protected by trainmen.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED
1942, 1943 and 1944

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1942	176	+ 12.1%	14	+ 100.0%	50	+ 28.2%
		1943	149	- 15.3%	6	- 57.1%	42	- 16.0%
		1944	119	- 20.1%	6		38	- 9.5%
	PROTECTED	1942	268	+ 3.1%	23	+ 43.8%	69	- 9.2%
		1943	202	- 24.6%	27	+ 17.4%	54	- 21.7%
		1944	224	+ 10.9%	20	- 25.9%	83	+ 53.7%
RURAL	UNPROTECTED	1942	171	- 16.2%	25	- 16.7%	68	+ 19.3%
		1943	153	- 10.5%	16	- 36.0%	11	- 39.7%
		1944	148	- 3.3%	19	+ 18.7%	41	
	PROTECTED	1942	91	- 19.5%	12	+ 71.4%	37	- 21.3%
		1943	87	- 4.4%	11	- 8.3%	24	- 35.1%
		1944	83	- 4.6%	8	- 27.3%	17	- 29.2%

* Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED
1942, 1943 and 1944

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1942	315		1.6
	1943	281	10.8	
	1944	266	5.3	
		PERSONS KILLED		
	1942	45		10.6
	1943	41	8.9	
	1944	26	36.6	
		PERSONS INJURED		
	1942	90		25.0
	1943	77	14.4	
	1944	66	14.3	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1942	391	7.8	
	1943	310	20.7	
	1944	308	0.6	
		PERSONS KILLED		
	1942	29		3.6
	1943	19	34.5	
	1944	27		42.1
		PERSONS INJURED		
	1942	134	8.8	
	1943	84	37.3	
	1944	113		34.5

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENT OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	32	5.58	3	15
1 to 1:59 a.m.	19	3.31	2	1
2 to 2:59 a.m.	26	4.53	5	11
3 to 3:59 a.m.	16	2.79		4
4 to 4:59 a.m.	10	1.74	1	4
5 to 5:59 a.m.	11	1.92	1	5
6 to 6:59 a.m.	30	5.23	1	9
7 to 7:59 a.m.	39	6.79	4	6
8 to 8:59 a.m.	14	2.44	2	4
9 to 9:59 a.m.	13	2.27	2	8
10 to 10:59 a.m.	20	3.48	1	10
11 to 11:59 a.m.	14	2.44	4	
Noon to 12:59 p.m.	25	4.36		1
1 to 1:59 p.m.	27	4.70	3	4
2 to 2:59 p.m.	24	4.18	2	14
3 to 3:59 p.m.	21	3.65	1	1
4 to 4:49 p.m.	29	5.05	2	
5 to 5:59 p.m.	25	4.35	1	6
6 to 6:59 p.m.	20	3.48	2	12
7 to 7:59 p.m.	41	7.14	3	30
8 to 8:59 p.m.	27	4.70	2	1
9 to 9:59 p.m.	21	3.66	1	7
10 to 10:59 p.m.	38	6.62	4	14
11 to 11:59 p.m.	32	5.58	3	12
TOTAL	574	100.00	53	179

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENT OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	59	10.28	8	27
Monday	78	13.59	6	11
Tuesday	86	14.98	9	14
Wednesday	78	13.59	6	53
Thursday	87	15.16	6	18
Friday	98	17.07	9	34
Saturday	88	15.33	9	22
TOTAL	574	100.00	53	179

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENT OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	59	10.28	5	17
February	57	9.93	8	16
March	63	10.98	6	22
April	38	6.62	5	6
May	37	6.45	1	6
June	38	6.62	2	7
July	30	5.23	2	3
August	33	5.75	2	8
September	44	7.66	7	15
October	58	10.10	6	26
November	46	8.01	4	14
December	71	12.37	8	[illegible]
TOTAL	574	100.00	53	179

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENT OCCURRED
1942, 1943 and 1944

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1942	629	72	207
	1943	529	56	146
	1944	522	52	161
Public Siding	1942	66	1	14
	1943	49	4	12
	1944	35	1	16
Private Siding	1942	11	1	3
	1943	13		3
	1944	17		2
Private Grade Crossing (Private Road)	1942	119	15	20
	1943	87	11	12
	1944	88	8	24

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1942, 1943 and 1944

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1942	167	50	206
	1943	132	40	152
	1944	118	39	140
Pedestrians	1942	37	23	14
	1943	26	19	7
	1944	17	14	4
Streetcars, Autobuses, Taxicabs	1942	1		2
	1943			
	1944	13		34
Bicycles, Motorcycles, Wagons	1942	3	1	2
	1943	3	1	2
	1944	5		1

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO INJURIES TO PERSONS
1942, 1943 and 1944

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR: DECREASE	PER CENT VARIATION FROM PREVIOUS YEAR: INCREASE
Unprotected	1942	245		
	1943	227	12.2	
	1944	206	7.3	
Protected	1942	253	9.3	
	1943	203	7.7	
	1944	228	19.8	12.3

TABLE B - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENTS	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
Auto in motion and struck by train	32	68	269	30.16
Auto driven into side of engine or train moving over crossing	4	25	127	14.24
Auto driven into side of engine or train standing on crossing	3	37	30	3.36
Auto driven through lowered gates into side of engine or train moving over crossing		2	5	0.56
Auto driven through lowered gates into side of engine or train standing on the crossing				
Auto driven through lowered gates and struck by engine or train		1	2	0.22
Auto stalled on crossing and struck by train		7	100	11.08
Total accidents involving contact between train and auto	39	140	538	60.42
Auto driven through crossing gate - no contact with train		3	332	37.22
Auto driven into flashing light signals - no contact with train	2	1	21	2.36
Total accidents involving automobiles at grade crossings	41	144	892	100.00

TABLE C - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	66	21	25	40	19.89
Passenger train - reverse movement					
Freight train - normal movement	228	70	27	94	51.92
Freight train - reverse movement	7	2		3	1.57
Freight train - car ahead of engine	7	2		3	1.57
Switching movement - engine normal ahead of draft	34	7		6	7.18
Switching movement - engine reverse ahead of draft	2				0.56
Switching movement - engine pushing cars	20	4		15	4.18
Light engine - normal movement	52	9	1	11	10.65
Light engine - reverse movement	11	2		2	1.26
Motor track cars	5	3		3	1.39
Cars not attached	2				0.56
TOTAL	434	140	53	179	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1942, 1943 and 1944

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	512	1942	473*	0.924	3	16
	509	1943	374*	0.735	1	4
	505	1944	363*	0.719	2	8
Watchman	348	1942	38	0.109	1	6
	352	1943	37	0.105	3	13
	346	1944	36	0.104	4	7
Bells	139	1942	19	0.137	1	7
	141	1943	14	0.099	1	2
	141	1944	12	0.085	4	3
Visual Signals	1161	1942	194*	0.167	9	54
	1164	1943	152*	0.131	11	42
	1174	1944	177*	0.151	8	42
Trainmen	1446	1942	67	0.046	3	17
	1442	1943	51	0.035	5	16
	1439	1944	48	0.033	1	7

* Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES 1942, 1943 and 1944

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1942	15	2	7
	1943	10		3
	1944	16	2	2
Gates out of order	1942	2		
	1943			
	1944	1		
Persons passing under or around lowered gates	1942	8	5	3
	1943	9	9	
	1944	5	2	3
Automobile driven through lowered gates striking or being struck by train	1942	14	1	6
	1943	5	1	
	1944	7		3
Unassigned	1942	8		
	1943	8		1
	1944	7		

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1942, 1943 and 1944

TYPE OF PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR (DECREASE / INCREASE)
Gates struck and damaged	1942	436	12.8
	1943	352	19.5
	1944	332	6.0
Flashing light signals struck and damaged	1942	31	10.7
	1943	18	41.9
	1944	21	16.7

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART TIME BY WATCHMEN OR GATES ------- 1935 - 1944

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1935	41	3	42
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32		24
1940	46	4	13
1941	42	2	20
1942	55	3	22
1943	34	1	12
1944	27	1	8

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENT OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	262	98	41	95	62.72
Cloudy	113	22	8	59	23.52
Fog	28	6	2	10	5.92
Snow	14	3	1	3	4.[illegible]
Rain	17	11	1	12	4.88
TOTAL	434	140	53	179	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	23	7	3	37	5.23
1 - 5	157	30	3	37	32.58
6 - 10	92	18	1	24	19.16
11 - 20	78	28	12	24	18.46
21 - 30	52	24	8	29	13.24
31 - 40	15	18	14	14	5.75
41 - 50	7	8	5	11	2.61
51 - 60	3	3	3	1	1.05
61 - 70	3	2	3	1	0.87
Over 70					
Not Reported	4	2	1	1	1.05
TOTAL	434	140	53	179	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	280	82	28	116	64.99
Wet	59	16	4	25	13.47
Muddy	2				0.36
Snowy	30	6	2	6	6.46
Icy	32	3		5	6.28
Not Reported	31	16	5	23	8.44
TOTAL	434	123	39	175	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	26	3	10	4.67
21 - 30	64	7	33	11.49
31 - 40	58	3	26	10.41
41 - 50	60	6	18	10.77
51 - 60	52	12	20	9.34
Over 60	17	1	6	3.05
Not Reported	280	7	62	50.27
TOTAL	557	39	175	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	492	38	170	88.33
Female	46	1	5	8.26
Not Reported	19			3.41
TOTAL	557	39	175	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	455	27	152	81.69
Not Familiar	8		4	1.44
Not Reported	94	12	19	16.87
TOTAL	557	39	175	100.00

TABLE 2

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

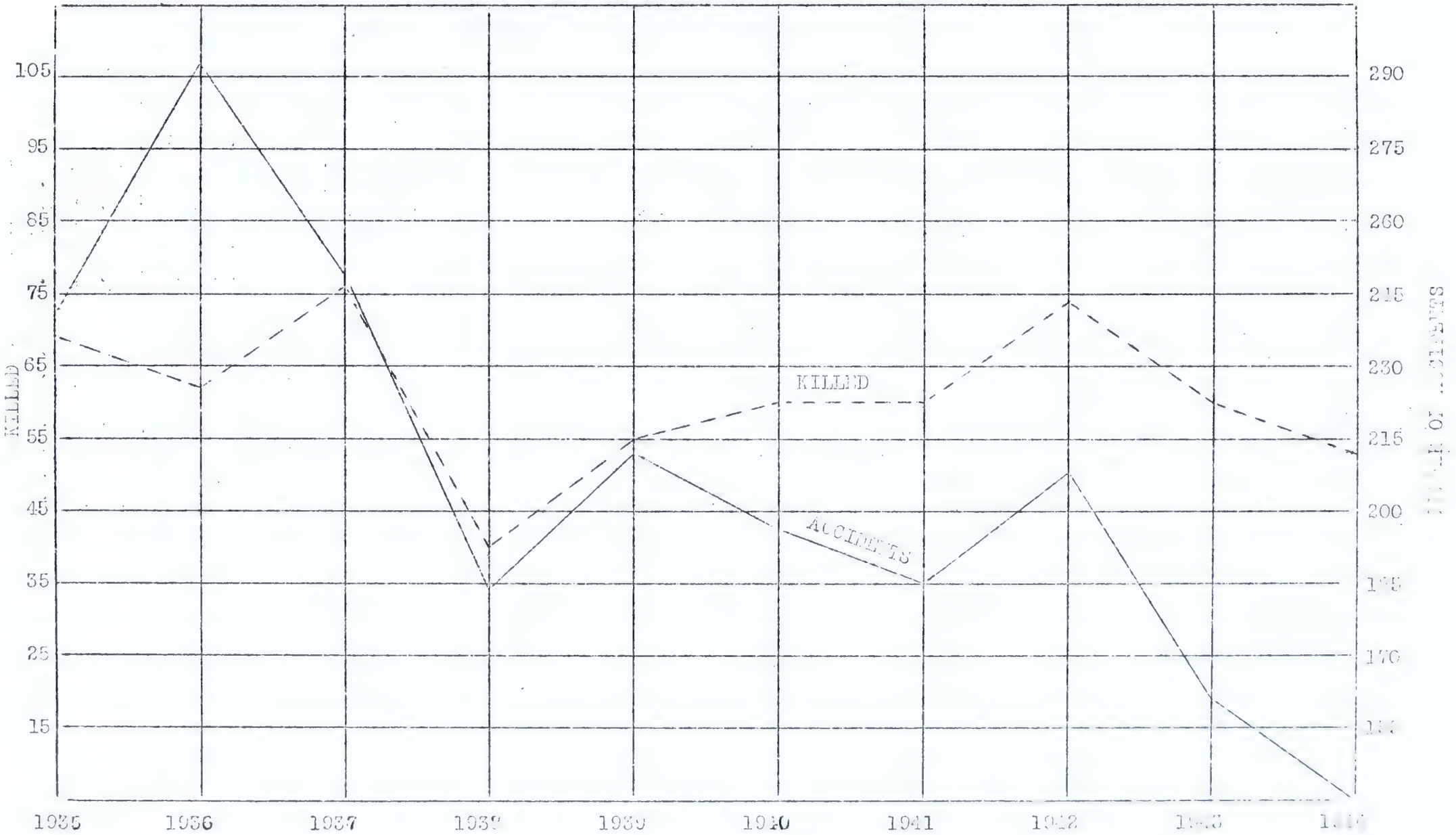
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	3		1	0.52
Allegheny	75	15	31	13.07
Armstrong	9			1.57
Beaver	7	3		1.22
Bedford				
Berks	10		1	1.74
Blair	3			0.52
Bradford	1			0.17
Bucks	4	2		0.70
Butler	10	5	2	1.74
Cambria	9		1	1.57
Cameron				
Carbon	3		1	0.52
Centre	4			0.70
Chester	4	1	1	0.70
Clarion	3		1	0.52
Clearfield	20	1	4	3.48
Clinton	5	1		0.87
Columbia	8	1	1	1.39
Crawford	10	5	3	1.74
Cumberland	11		4	1.92
Dauphin	3			0.52
Delaware	11		3	1.92
Elk	5		3	0.87
Erie	24	2	3	4.18
Fayette	16	1	2	2.79
Forest	1			0.17
Franklin	6		1	1.05
Fulton				
Green	2			0.35
Huntingdon	1		1	0.17
Indiana	9	2	2	1.57
Jefferson	3			0.52
Juniata				
Lackawanna	14	2	14	2.44
Lancaster	16		3	2.79
Lawrence	2			0.35
Lebanon	4			0.70
Lehigh	4	1		0.70
Luzerne	25	1	2	4.36
Lycoming	13	1	2	2.27
McKean	5		6	0.87
Mercer	22		4	3.83
Mifflin	2			0.35
Monroe	2		1	0.35
Montgomery	14	2	2	2.44
Montour	4		1	0.70
Northampton	3		2	0.52
Northumberland	22	2	8	3.83
Perry				
Philadelphia	17		28	2.96
Pike				
Potter	1			0.17
Schuylkill	26	1	9	4.53
Snyder				
Somerset	15		3	2.61
Sullivan	2			0.35
Susquehanna	2			0.35
Tioga	8		1	1.39
Union	4		1	0.70
Venango	2		1	0.35
Warren	2			0.35
Washington	16		2	2.79
Wayne	1			0.17
Westmoreland	20	2	14	3.48
Wyoming				
York	26	2	9	4.53
TOTAL	574	53	179	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1935 - 1944

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		AUTOMOBILES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1935	11,829	674	69	319	1,787,836	3.77
1936	11,764	669	62	378	1,913,193	3.50
1937	11,509	638	77	322	2,045,228	3.12
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,362	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91

* Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITIES AT GRADE CROSSINGS
OVER STEAM RAILROADS IN PENNSYLVANIA
1935 - 1944



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
270	Collision with other vehicle		44		277				1		114		2		438		54.8
14	Collision with fixed object		4	2	15						3			2	22	15.4	2.7
141	Struck by taxicab				6			6	132		2		1	6	141	46.1	17.7
41	Running or walking into side of taxicab							3	38					3	38	23.1	4.8
18	Boarding or alighting (Standing Vehicle)				18										18		2.3
5	Falling within vehicle				5										5		0.6
37	Caught by vehicle doors				36								1		37		4.6
12	Jumping on or off vehicle in motion			2	11									2	11	15.4	1.4
46	Sudden stop of vehicle				60				1						61		7.6
4	Defect or failure of equipment				4										4		0.5
2	Vehicle skidded		2		2				1						5		0.6
3	Highway defect				9										9		1.1
2	Apparent reckless operation of vehicle				2										2		0.3
7	Miscellaneous				8										8		1.0
602	TOTAL		50	4	453			9	173		119		4	13	799		
	Per Cent Killed			30.8				69.2								100.0	
	Per Cent Injured		6.3		56.7				21.6		14.9		0.5				100.0

K - Killed
I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES K	EMPLOYEES I	PASSENGERS K	PASSENGERS I	TRESPASSERS K	TRESPASSERS I	PEDESTRIANS K	PEDESTRIANS I	OCCUPANTS OF OTHER VEHICLES K	OCCUPANTS OF OTHER VEHICLES I	OTHERS K	OTHERS I	TOTAL K	TOTAL I	PER CENT K	PER CENT I
392	Collision with other vehicle	1	16	1	449				4		331		4	9	804	34.6	41.8
48	Collision with fixed object		6		184				3		3				196		10.2
103	Struck by autobus		2	1	1			10	78		8	1	6	12	96	46.2	5.0
79	Running or walking into side of autobus							4	74				1	4	75	15.4	3.9
300	Boarding or alighting (Standing vehicle)		2	1	299									1	301	3.8	15.7
123	Falling within vehicle				127										127		6.6
65	Caught by vehicle doors				64								1		65		3.4
7	Jumping on or off vehicle in motion				3		4								7		0.4
61	Sudden stop of vehicle		1		67										68		3.5
34	Defect or failure of equipment		6		71				1		3				81		4.2
18	Vehicle skidded		1		34				1		1				37		1.9
11	Highway defect		2		9										11		0.6
2	Apparent reckless operation of vehicle				6						8				14		0.7
38	Miscellaneous		8		29				1		2				40		2.1
1201	TOTAL	1	44	3	1343		4	14	163	7	350	1	12	26	1922		
	Per Cent Killed	3.8		11.6				53.9		26.9		3.8				100.0	
	Per Cent Injured		2.3		69.9		0.2		8.5		18.5		0.6				100.0

K - Killed
I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP 2 PARTY
SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
	Collision with other vehicle																
	Collision with fixed object																
	Struck by taxicab, autobus or truck																
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
	TOTAL																
	Per Cent Killed																
	Per Cent Injured																

K- Killed
I- Injured

Note: No accidents reported during the year

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
63	Collision with other vehicle		14		4					6	100		2	6	120	40.0	81.6
4	Collision with fixed object	1	1			1			1					2	2	13.3	1.4
10	Struck by taxicab, autobus or truck							3	6		1			3	7	20.0	4.8
6	Running or walking into side of taxicab, autobus or truck							2	4					2	4	13.3	2.7
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
2	Jumping on or off vehicle in motion					1			1					1	1	6.7	0.7
	Sudden stop of vehicle																
4	Defect or failure of equipment		4												4		2.7
	Vehicle skidded																
1	Highway defect		1												1		0.7
	Apparent reckless operation of vehicle																
8	Miscellaneous	1	6								2			1	8	6.7	5.4
98	TOTAL	2	26		4	2		5	12	6	103		2	15	147		
	Per Cent Killed	13.3				13.3		33.4		40.0						100.0	
	Per Cent Injured		17.7		2.7				8.2		70.0		1.1				100.0

K - Killed
I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
18	Collision with other vehicle	1	2		1					2	21			3	24	33.3	66.7
2	Collision with fixed object		2								2				4		11.1
3	Struck by taxicab, autobus or truck							3						3		33.3	
4	Running or walking into side of taxicab, autobus or truck							1	3					1	3	11.2	8.3
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
2	Defect or failure of equipment		1					2	3					2	4	22.2	11.1
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of Vehicle																
1	Miscellaneous		1												1		2.8
30	TOTAL	1	6		1			6	6	2	23			9	36		
	Per Cent Killed	11.1						66.7		22.2						100.0	
	Per Cent Injured		16.7		2.8				16.7		63.8						100.0

K - Killed
I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1942		60		406			6	96		182		9	6	758
1943	2	55		508			6	197	2	208		13	10	985
1944		50	4	453			9	173		119		4	13	799

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING PASSENGER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1942	2	29	23	1339		1	10	150	10	364	1	21	46	1904
1943	2	35	5	1119		1	17	148	6	350	1	19	31	1672
1944	1	44	3	1343		4	14	163	7	356	1	12	26	1922

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1942				5						1				6
1943*														
1944*														

K - Killed
I - Injured

* No accidents reported during years of 1943 and 1944.

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1942	2	28		2		2	2	17	13	115	5	8	22	172
1943	4	35	1	4		1	5	23	5	78	2	5	17	144
1944	2	26		4	2		5	12	6	103		2	15	147

TABLE [illegible]
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1942	4	15					1	4		29	1	8	6	56
1943	1	7						3	4	14		1	5	25
1944	1	6		1			6	6	2	23			9	36

K - Killed
I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Transportation

1945

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
May 31, 1946

Note
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PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Transportation

Harrisburg, Pennsylvania
May 31, 1946

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1945.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1945, the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	64	Telephone	204
Street Railways	17	Sewerage	14
Pipe Lines	6	Canal	2
Ferries	16	Wharfage	3
Express	1	Bridge (Toll)	11
Common Carriers by Water	10	Telegraph	2
Bus--Scheduled Service	418	Steam Heat	28
Taxi--Call and Demand	457	Stock Yards	3
Bus--Group and Party	202	Airways	4
Truck--Common Carriers	7,431	Incline Plane	3
Electric	49	Water	468
Gas	129		

Total - 9,542

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 823 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages, summarized on page 15, will show that in 1945 there was an increase in casualty accidents involving steam railroads and street railways as compared with the previous year, whereas accidents involving motor transportations decreased. Compared with the minor gain in the total number of accidents reported by all utilities, the number of killed and injured show a substantial increase.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

Guy R. Johnson

Guy R. Johnson
Director of Bureau

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	3,833	341	3,905	33.61	61.44	28.27
Street Railway	4,897	109	6,007	42.93	19.64	43.48
Motor Transportation	1,903	70	3,122	16.68	12.61	22.60
Electric	435	24	417	3.81	4.33	3.02
Gas	158	7	185	1.39	1.26	1.34
Water	56	-	56	0.49	-	0.40
Telephone & Telegraph	103	-	105	0.90	-	0.76
Other Utilities	22	4	18	0.19	0.72	0.13
TOTAL	* 11,406	* 550	* 13,809	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	111	3087	4	456	7	173	12	399	-	126	-	55	-	86	1	16	135	4398	24.32	31.31
Trespasser	124	65	9	33	-	4	1	4	-	2	-	-	-	-	2	-	136	108	21.51	0.78
Other	8	141	-	37	4	55	10	7	-	3	-	-	-	16	-	2	22	261	3.96	1.91
Passenger, Patron or Consumer	20	433	11	3652	4	1818	1	7	7	54	-	1	-	3	1	-	44	5968	7.93	43.20
Pedestrian	13	12	63	606	26	335	-	-	-	-	-	-	-	-	-	-	102	953	18.38	6.90
Occupant Other Vehicle	65	164	22	1223	29	737	-	-	-	-	-	-	-	-	-	-	116	2124	20.90	15.37
TOTAL	341	3905	109	6007	70	3122	24	417	7	185	-	56	-	105	4	18	* 550	13809		
Per Cent Killed	61.44		19.64		12.61		4.33		1.26						0.72				100.00	
Per Cent Injured		28.27		43.48		22.60		3.02		1.34		0.40		0.76		0.13				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
171	Grade Crossings (for details-see appendix)		6					78	176	78	182	22.87	4.
41	Collisions	7	103		112				2	7	217	2.05	5.
26	Derailments	8	33	16	45				12	24	90	7.04	2.
120	At station or loading platform		14		26				81		121		3.
6	Defect or failure of roadway or equipment	1	6							1	6	0.29	0.
121	Operating switches		121								121		3.
94	Struck overhead or side obstruction	5	89							5	89	1.47	2.
233	Repairing track or roadbed	2	239							2	239	0.59	6.
149	Struck by flying missile, glass, etc.		143		3		1		4		151		3.
130	Coupling or uncoupling	4	125						1	4	126	1.17	3.
62	Falling on locomotive or car		48		12				2		62		1.
344	Falling from locomotive or car	10	283	1	30	6	11	1	1	21	325	6.16	8.
530	Getting on or off locomotive or car		392		130	2	5		2	2	529	0.59	13.
320	Struck by locomotive or car	71	74		5	113	42	7	16	191	137	56.01	3.
259	Operating hand brakes		259								259		6.
515	Sudden starting or stopping of trains	2	481		35	1			18	3	534	0.88	13.
5	Coming in contact with catenary wire		3			1	1			1	4	0.29	0.
217	On or about locomotive		218								218		5.
490	Miscellaneous	1	450		35	1	5		5	2	495	0.59	12.
3833	TOTAL	111	3087	20	433	124	65	86	320	341	3905		
	Per Cent Killed	32.55		5.87		36.36		25.22				100.00	
	Per Cent Injured		79.05		11.09		1.66		8.20				100.

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE *
COLLISIONS:				
MAIN TRACK	114			+20.00
YARD TRACK	477	591	24.59	-13.59
DERAILMENTS:				
MAIN TRACK	711			+18.30
YARD TRACK	651	1362	56.68	+21.00
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		379	15.77	+ 9.22
MISCELLANEOUS		71	2.96	+18.33
TOTAL		2403	100.00	+ 9.58

Note: 888 of the 1,362 Derailments (65.2%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1943	2179	+15.23	$2,003,125	+ 7.59
1944	2193	+ 0.64	$1,915,607	- 4.37
1945	2403	+ 9.58	$2,327,128	+21.48

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE
	1943	1944	1945		1943	1944	1945	
EMPLOYEES	95	120	111	- 7.50%	2692	2899	3087	+ 6.4[illegible]
PASSENGERS	81	6	20	+233.33%	652	360	4[illegible]	+ 1[illegible]
TRESPASSERS	131	111	124	+ 11.71%	75	70	55	- 7.1[illegible]
OTHERS **	80	70	86	+ 22.86%	259	288	320	+ 11.11
TOTAL	407	307	341	+ 11.07%	3678	3637	3905	+ 7.37[illegible]

* Comparison of 1945 with 1944
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7

ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	5	87	4.50	2.82
Road Firemen	7	202	6.31	6.54
Road Conductors	8	172	7.21	5.57
Road Brakemen	16	524	14.42	16.98
Road Flagmen	2	45	1.80	1.46
Road Baggagemen		13		0.42
Yard Enginemen and Firemen		127		4.11
Yard Brakemen and Conductors	36	1,331	32.44	43.12
Yard Switch Tenders		9		0.29
Crossing Watchmen	1	2	0.90	0.06
Track Walkers				
Sectionmen and Work Train Laborers	22	245	19.82	7.94
Signalmen and Signal Maintainers		27		0.88
Station Baggagemen		6		0.19
Car Cleaners		5		0.16
Car Inspectors	5	10	4.50	0.32
Car Repairmen	2	8	1.80	0.26
Carpenters		9		0.29
Dining Car Employees		165		5.35
Miscellaneous	5	74	4.50	2.40
Employees Not on Duty	2	26	1.80	0.84
TOTAL	111	3,087	100.00	100.00

TABLE NO.8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					1	0.48					5	0.93
21 - 30		3	3.26	1	53	25.84		8	4.44	4	92	17.78
31 - 40	1	4	5.43	4	88	44.02	1	13	7.78	4	165	31.30
41 - 50	4	28	34.78	2	46	22.96	1	41	23.33	2	150	28.15
51 - 60		31	33.70		9	4.30	4	74	43.34	3	85	16.30
61		1	1.09		1	0.48		4	2.22	1	6	1.30
62		4	4.35		1	0.48	1	7	4.44	1	11	2.22
63		5	5.43					6	3.33		4	0.74
64		1	1.09				1	6	3.89		1	0.18
65		4	4.35					3	1.67		1	0.18
Over 65		6	6.52		1	0.48		7	3.89		2	0.37
Not Reported					2	0.96		3	1.67	1	2	0.55
TOTAL	5	87	100.00	7	202	100.00	8	172	100.00	16	524	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					1	0.79	1	14	1.10	1	21	0.86
21 - 30		5	10.64		14	11.02	4	344	25.46	9	519	20.61
31 - 40		14	29.79		32	25.20	12	418	31.15	22	[illegible]	29.61
41 - 50		10	21.27		36	28.35	7	314	23.48	16	[illegible]	25.03
51 - 60	2	9	23.40		21	16.54	6	181	13.68	15	[illegible]	16.[illegible]
61		3	6.38		12	9.45	3	7	0.73	4	[illegible]	1.[illegible]
62					3	2.36		12	0.88	2	[illegible]	1.[illegible]
63					2	1.57		10	0.73		[illegible]	1.[illegible]
64		1	2.13		2	1.57	1	7	0.58	2	[illegible]	0.[illegible]
65					1	0.79		5	0.37		[illegible]	0.[illegible]
Over 65		1	2.13		2	1.57	2	7	0.66	2	[illegible]	1.09
Not Reported		2	4.26		1	0.79		12	0.88	1	[illegible]	0.[illegible]
TOTAL	2	45	100.00		127	100.00	36	1331	100.00	74	[illegible]	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PERCENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
175	Collision of cars	2	51		475									2	526	1.9	8.8
1217	Collision of car and vehicle	1	80	4	539			22	1219	1	15		28	28	1881	25.7	31.3
647	Struck by car		3	6	5	7	3			61	568		5	74	584	67.9	9.7
27	Derailment of car		7		96					1				1	103	0.9	1.7
26	Contact with overhead or side obst.		5		32		1				1				39		0.6
1	Contact with trolley or feed wire or third rail					1								1		0.9	
75	Emergency stop		6		74										80		1.3
125	Defect of failure of roadway or eqp.		23		112				2						137		2.3
337	Caught by doors		2		343										345		5.7
220	Boarding standing car		7		214										221		3.7
650	Alighting from car		19		645										664		11.1
614	Falling within car		6		613										619		10.3
41	Jumping on or off car while in motion		3		14	1	28							1	45	0.9	0.8
344	At elevated or subway platforms			1	345									1	345	0.9	5.7
40	Repair work on right of way	1	39											1	39	0.9	0.6
42	Struck by flying missile, glass, etc.		14		36						1				51		0.9
307	Miscellaneous		191		109		1		2		21		4		328		5.5
4897	TOTAL	4	456	11	3652	9	33	22	1223	63	606		37	109	6007		
	Per Cent Killed	3.7		10.1		8.2		20.2		57.8						100.0	
	Per Cent Injured		7.6		60.8		0.5		20.4		10.1		0.6				100.0

K - Killed
I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1945 WITH 1944	YEAR			COMPARISON OF 1945 WITH 1944
	1943	1944	1945		1943	1944	1945	
Employees	4	6	4	- 33.33%	289	400	456	+ 14.00%
Passengers	12	13	11	- 15.38%	3983	3812	3652	- 4.20%
Trespassers	12	9	9	-	27	23	33	+ 43.48%
Occupants of other vehicles	13	24	22	- 8.33%	1139	1172	1223	+ 4.35%
Pedestrians	52	44	63	+ 43.18%	755	643	606	- 5.75%
Others	1			-	71	36	37	+ 2.78%
TOTAL	94	96	109	+ 13.54%	6264	6086	6007	- 1.30%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
873	Collision with other Vehicle	6	112	2	986			3	4	27	725	1	23	39	1850	55.7	59.3
74	Collision with fixed object	1	17	2	243				3		8		8	3	279	4.3	8.9
230	Struck by auto-bus, taxicab or truck		1		2			18	206			3	17	21	226	30.0	7.2
116	Running or walking into side of auto-bus, taxicab or truck				1			5	109				1	5	111	7.1	3.6
201	Boarding or alighting (Standing Vehicle)		2		199								1		202		6.5
97	Falling within vehicle				101										101		3.2
79	Caught by vehicle doors				79										79		2.5
17	Jumping on or off vehicle in motion		2		11		4								17		0.6
87	Sudden stop of vehicle				99				2						101		3.2
36	Defect or failure of equipment		8		34				4		1				47		1.5
10	Vehicle skidded		3		18										21		0.7
23	Highway defect		6		17										23		0.7
2	Apparent reckless operation of vehicle		3												3		0.1
58	Miscellaneous		19		28				7	2	3		5	2	62	2.9	2.0
1903	TOTAL	7	173	4	1818		4	26	335	29	737	4	55	70	3122		
	Per Cent Killed	10.0		5.7				37.2		41.4		5.7				100.0	
	Per Cent Injured		5.5		58.2		0.1		10.8		23.6		1.8				100.0

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	NUMBER OF ACCIDENTS (NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	457	585	5	809	369	$ 89,678.38
Schedule Route (Bus Service)	418	1,156	35	2,029	440	220,669.16
Group and Party (Bus Service)	202	2	2	11	-	2,200.00
Freight & Merchandise (Truck)	7431	128	24	221	123	144,539.24
Contract Carrier (Persons and Property)	823	32	4	52	37	54,060.04
TOTAL	9331	1,903	70	3,122	969	$511,146.82

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1943	9,551	2,516	- 2.82%	63	-21.25%	2,826	- 2.41%	$376,918.17	+10.54%
1944	9,017	2,781	+10.53%	63	-	2,904	+ 2.76%	376,709.13	- 0.06%
1945	9,331	2,872	+ 3.27%	70	+11.11%	3,122	+ 7.51%	511,146.82	+35.69%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
31	Electric - Contact with charged wires or equipment	6	10		3	10	5	1	1	17	19	48.6	2.5
219	Falling - (Other than into water	2	210		1		4		2	2	217	5.7	27.8
233	Striking against or struck by objects	4	226	1			1		2	5	229	14.3	29.3
73	Handling materials		73								73		9.3
1	Defect or failure of equipment or machinery		1								1		0.1
6	Involving use of tools - no defect		6								6		0.8
32	Automobile accident		15				15		5		35		4.5
	Failure to use protective devices provided												
40	Burns - not from electric source	1	34				2		4	1	40	2.8	5.1
11	Explosion		2		2				10		14		1.8
3	Drowning			2				1		3		8.6	
21	Asphyxiation		4					7	39	7	43	20.0	5.5
14	Infection from minor wounds		14								14		1.8
90	Miscellaneous		87				1		2		90		11.5
774	TOTAL	13	682	3	6	10	28	9	65	35	781		
	Per Cent Killed	37.1		8.6		28.6		25.7				100.0	
	Per Cent Injured		87.3		0.8		3.6		8.3				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1943	1944	1945	COMPARISON OF 1945 WITH 1944	1943	1944	1945	COMPARISON OF 1945 WITH 1944
EMPLOYEES	17	16	13	-18.75%	641	669	682	+ 1.9[illegible]
TRESPASSERS	7	2	3	+50.00%	3	4	6	+50.0[illegible]
OTHERS	14	10	10	-	20	31	28	- 9.0[illegible]
PATRONS OR CONSUMERS	15	13	9	-30.77%	26	26	65	+150.0[illegible]
TOTAL	53	41	35	-14.63%	710	730	781	+ 6.9[illegible]

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
31	Electric - Contact with charged wires or equipment	6	10		3	10	5	1	1	17	19	70.8	4.6
126	Falling - (Other than into water)	2	123		1					2	124	8.3	29.7
144	Striking against or struck by objects	3	139	1					1	4	140	16.7	33.6
41	Handling materials		41								41		9.8
	Defect or failure of equipment or machinery												
4	Involving use of tools--no defect		4								4		1.0
9	Automobile accident		6						4		10		2.4
	Failure to use protective devices provided												
19	Burns--not from electric source	1	17				1			1	18	4.2	4.3
1	Explosion		1								1		0.2
	Drowning												
	Asphyxiation												
10	Infection from minor wounds		10								10		2.4
50	Miscellaneous		48				1		1		50		12.0
435	TOTAL	12	399	1	4	10	7	1	7	24	417		
	Per Cent Killed	50.0		4.2		41.6		4.2				100.0	
	Per Cent Injured		95.6		1.0		1.7		1.7				100.0

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1943	14	364	2	1	13	24	2	7	31	396
1944	10	389		1	9	15	3	3	22	408
1945	12	399	1	4	10	7	1	7	24	417

K - Killed
I - Injured

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wire or equipment												
36	Falling - (Other than into water)		35				1				36		19.5
46	Striking against or struck by objects		47								47		25.4
14	Handling materials		14								14		7.6
	Defect or failure of equipment or machinery												
	Involving use of tools -- no defect												
2	Automobile accident						1		1		2		1.1
	Failure to use protective devices provided												
14	Burns--not from electric source		10				1		4		15		8.1
9	Explosion				2				10		12		6.5
	Drowning												
21	Asphyxiation		4					7	39	7	43	100.0	23.2
1	Infection from minor wounds		1								1		0.5
15	Miscellaneous		15								15		8.1
158	TOTAL		126		2		3	7	54	7	185		
	Per Cent Killed							100.0				100.0	
	Per Cent Injured		68.1		1.1		1.6		29.2				100.0

K - Killed
I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1943		107		1	1	3	13	18	14	129
1944	3	119		2		8	9	13	12	142
1945		126		2		3	7	54	7	185

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
14	Falling--(Other than into water)		14								14		25.0
19	Striking against or struck by objects		18						1		19		33.9
8	Handling materials		8								8		14.3
	Defect or failure of equipment or machinery												
	Involving use of tools - no defect												
1	Automobile accident		1								1		1.8
	Failure to use protective devices provided												
3	Burns--not from electric source		3								3		5.3
1	Explosion		1								1		1.8
	Drowning												
	Asphyxiation												
1	Infection from minor wounds		1								1		1.8
9	Miscellaneous		9								9		16.1
56	TOTAL		55						1		56		
	Per Cent Killed												
	Per Cent Injured		98.2						1.8				100.0

K - Killed
I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1943		51	2						2	51
1944	1	63	1			2			2	65
1945		55						1		56

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
38	Falling - (Other than into water)		33				3		2		38		36.2
23	Striking against or struck by objects		22				1				23		21.9
7	Handling materials		7								7		6.6
1	Defect or failure of equipment or machinery		1								1		1.0
1	Involving use of tools - no defect		1								1		1.0
17	Automobile accident		7				12				19		18.1
	Failure to use protective devices provided												
2	Burns - not from electric source		2								2		1.9
	Explosion												
	Drowning												
	Asphyxiation												
	Infection from minor wounds												
14	Miscellaneous		13						1		14		13.3
103	TOTAL		86				16		3		105		
	Per Cent Killed												
	Per Cent Injured		81.9				15.2		2.9				100.0

K - Killed
I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1943	3	98		1		13		1	3	113
1944	2	85		1		5		10	2	101
1945		86				16		3		105

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
5	Falling - (Other than into water)		5								5		27.8
1	Striking against or struck by objects	1								1		25.0	
3	Handling materials		3								3		16.7
	Defect or failure of equipment or machinery												
1	Involving use of tools - no defect		1								1		5.5
3	Automobile accident		1				2				3		16.7
	Failure to use protective devices provided												
2	Burns -- not from electric source		2								2		11.1
	Explosion												
3	Drowning			2				1		3		75.0	
	Asphyxiation												
2	Infection from minor wounds		2								2		11.1
2	Miscellaneous		2								2		11.1
22	TOTAL	1	16	2			2	1		4	18		
	Per Cent Killed	25.0		50.0				25.0				100.0	
	Per Cent Injured		88.9				11.1						100.0

K - Killed
I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1943		21	3						3	21
1944		13	1		1	1	1		3	14
1945	1	16	2			2	1		4	18

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipe Line and Steam Heating.

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1943 AND 1944

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1945 WITH 1944	YEAR			COMPARISON OF 1945 WITH 1944	YEAR			COMPARISON OF 1945 WITH 1944
	1943	1944	1945		1943	1944	1945		1943	1944	1945	
Steam Railroad	3592	3695	3833	+ 3.73	407	307	341	+ 11.07	3678	3637	3905	+ 7.37
Street Railway	5135	4942	4987	+ 0.91	94	96	109	+ 13.54	6264	6088	6007	- 1.30
Motor Transportation	1936	2011	1903	- 5.37	63	63	70	+ 11.11	2826	2904	3122	+ 7.51
Electric	409	418	435	+ 4.07	31	22	24	+ 9.09	396	408	417	+ 2.21
Gas	138	149	158	+ 6.04	14	12	7	- 41.67	129	142	185	+30.28
Water	53	66	56	-15.15	2	2	-	-100.00	51	65	56	-13.85
Telephone & Telegraph	114	103	103	-	3	2	-	-100.00	113	101	105	+ 3.96
Other Utilities	24	17	22	+29.41	3	3	4	+ 33.33	21	14	18	+28.57
TOTAL	11401	11401	11406*	+ 0.04	617	507	550*	+ 8.48	13478	13357	13809*	+ 3.38

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX
- 1945 -
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2,152	19.54
Protected by trainmen	1,444	13.12
Total Protected	3,596	32.66
Unprotected	7,413	67.34
TOTAL CROSSINGS	11,009	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	490	13.6
Watchmen	337	9.4
Flashing light signals	1,155*	32.1
Other visual signals	34**	0.9
Bells	136	3.8
Trainmen	1,444	40.2
TOTAL	3,596	100.0

* - Additional protection by short arm gates at six crossings.
** - Includes nine crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	224	72		6	5	1	229	79	308	53.20
Protected by gates	24	7		11	1	1	25	19	44	7.60
Protected by watchmen	28	1					28	1	29	5.01
Protected by bells	14	3			2		16	3	19	3.28
Protected by visual signals	89	43		8	4	1	93	52	145	25.04
Protected by trainmen	25	6			2	1	27	7	34	5.87
Total Accidents at Protected Crossings	180	60		19	9	3	189	82	271	46.80
Total Accidents--Non Casualty	404				14		418			72.19
Total Accidents--Casualty		132		25		4		161		27.81
TOTAL ACCIDENTS	536		25		18				579	100.00
Per Cent of Total Accidents	92.57		4.32		3.11				100.00	

NC - Non-Casualty; C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons And Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	29	92	5	1	1		35	93	128	[illegible]
Protected by gates	2	8	5	6		2	7	16	23	[illegible]
Protected by watchmen		3						3	3	[illegible]
Protected by bells	2	2					2	2	4	[illegible]
Protected by visual signals	26	40	3	5		1	29	46	75	[illegible]
Protected by trainmen		11				4		15	15	[illegible]
TOTAL	59	156	13	12	1	7	73	175	248	[illegible]
Killed and Injured at protected crossings	30	64	8	11		7	38	82	120	[illegible]
PerCent of total Killed & Injured	86.89		10.05		3.28					[illegible]

K - Killed; I - Injured

TABLE B - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1943, 1944 and 1945

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Decrease	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Increase
*PROTECTED	1943	2,166	33		3.1
	1944	2,166	27	18.2	
	1945	2,152	38		40.7
UNPROTECTED	1943	8,971	27	35.7	
	1944	8,892	26	3.7	
	1945	8,857	35		34.6

			INJURED		
*PROTECTED	1943	2,166	61	31.4	
	1944	2,166	70		14.8
	1945	2,152	67	4.3	
UNPROTECTED	1943	8,971	100	25.9	
	1944	8,892	109		9.0
	1945	8,857	108	0.9	

* - Not including those protected by trainmen.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED
1943, 1944 and 1945

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	UNPROTECTED	1943	149	- 15.3%	6	- 57.1%	42	- 16.0%
		1944	119	- 20.1%	6	-	38	- 9.5%
		1945	143	+ 20.2%	12	+100.0%	41	+ 7.9%
	PROTECTED	1943	202	- 24.6%	27	+ 17.4%	54	- 21.7%
		1944	224	+ 10.9%	20	- 25.9%	83	+ 53.7%
		1945	199	- 11.2%	21	+ 5.0%	63	- 24.1%
RURAL	UNPROTECTED	1943	153	- 10.5%	16	- 36.0%	41	- 39.7%
		1944	148	- 3.3%	19	+ 18.7%	41	-
		1945	165	+ 11.5%	23	+ 21.0%	52	+ [illegible]
	PROTECTED	1943	87	- 4.4%	11	- 8.3%	24	- 35.[illegible]
		1944	83	- 4.6%	8	- 27.3%	17	- 29.2
		1945	72	- 13.3%	17	+112.5%	19	+ 11.[illegible]

* - Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1943, 1944 and 1945

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1943	281	10.8	
	1944	266	5.3	
	1945	270		1.5
		PERSONS KILLED		
	1943	41	8.9	
	1944	26	36.6	
	1945	35		34.6
		PERSONS INJURED		
	1943	77	14.4	
	1944	66	11.3	
	1945	80		21.2
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1943	310	20.7	
	1944	308	0.6	
	1945	309		0.3
		PERSONS KILLED		
	1943	19	34.5	
	1944	27		42.1
	1945	38		40.7
		PERSONS INJURED		
	1943	84	37.3	
	1944	113		34.5
	1945	95	15.9	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	40	6.91	7	18
1 to 1:59 a.m.	28	4.84	2	8
2 to 2:59 a.m.	18	3.11	3	2
3 to 3:59 a.m.	15	2.59		6
4 to 4:59 a.m.	8	1.38	4	1
5 to 5:59 a.m.	8	1.38		2
6 to 6:59 a.m.	12	2.07	1	4
7 to 7:59 a.m.	26	4.49	2	7
8 to 8:59 a.m.	18	3.11	2	5
9 to 9:59 a.m.	18	3.11	3	6
10 to 10:59 a.m.	23	3.97	3	8
11 to 11:59 a.m.	30	5.18	6	9
Noon to 12:59 p.m.	30	5.18	4	10
1 to 1:59 p.m.	17	2.94	5	2
2 to 2:59 p.m.	26	4.49	1	11
3 to 3:59 p.m.	26	4.49	7	7
4 to 4:59 p.m.	29	5.01	2	9
5 to 5:59 p.m.	30	5.18	5	9
6 to 6:59 p.m.	37	6.39	1	14
7 to 7:59 p.m.	25	4.32	4	11
8 to 8:59 p.m.	25	4.32	3	10
9 to 9:59 p.m.	23	3.97	2	3
10 to 10:59 p.m.	27	4.66	1	7
11 to 11:59 p.m.	40	6.91	5	8
TOTAL	579	100.00	73	175

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	70	12.09	15	25
Monday	76	13.13	11	19
Tuesday	89	15.37	6	24
Wednesday	87	15.03	6	19
Thursday	83	14.33	13	29
Friday	96	16.58	14	31
Saturday	75	12.95	8	28
TOTAL	579	100.00	73	175

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	68	11.74	8	18
February	61	10.53	5	11
March	52	8.98	3	13
April	36	6.22	2	10
May	27	4.66	[illegible]	[illegible]
June	29	5.01	4	[illegible]
July	43	7.43	14	[illegible]
August	30	5.18	[illegible]	[illegible]
September	26	4.49	[illegible]	[illegible]
October	43	7.43	[illegible]	[illegible]
November	32	5.53	[illegible]	[illegible]
December	33	5.70	[illegible]	[illegible]
TOTAL	579	100.00	73	175

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS
1943, 1944 and 1945

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	509	1943	374*	0.735	1	4
	505	1944	363*	0.719	2	8
	490	1945	341*	0.696	2	8
Watchman	352	1943	37	0.105	3	13
	346	1944	36	0.104	4	7
	337	1945	29	0.086	-	3
Bells	141	1943	14	0.099	1	2
	141	1944	12	0.085	4	3
	136	1945	17	0.125	2	2
Visual Signals	1164	1943	152*	0.131	11	42
	1174	1944	177*	0.151	8	42
	1189	1945	155*	0.130	26	41
Trainmen	1442	1943	51	0.035	5	16
	1439	1944	48	0.033	1	7
	1444	1945	31	0.021	-	11

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES
1943, 1944 and 1945

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1943	10	-	3
	1944	16	2	2
	1945	12	-	6
Gates out of order	1943	-	-	-
	1944	1	-	-
	1945	1	-	-
Persons passing under or around lowered gates	1943	9	9	-
	1944	5	2	3
	1945	11	5	6
Automobile driven through lowered gates striking or being struck by train	1943	5	1	-
	1944	7	-	3
	1945	14	2	3
Unassigned	1943	8	-	1
	1944	7	-	-
	1945	6	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1943, 1944 and 1945)

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1943	352	19.3	
	1944	332	6.0	
	1945	310	6.6	
Flashing light signals struck and damaged	1943	18	41.9	
	1944	21		16.7
	1945	23		9.6

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING THE CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES ------ 1936 - 1945

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1936	30	2	30
1937	45	4	39
1938	31	1	26
1939	32	-	24
1940	16	4	13
1941	22	2	20
1942	54	3	22
1943	5[illegible]	1	12
1944	27	1	8
1945	25	5	6

TABLE T - CONDITION OF WEATHER WHILE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	255	106	55	[illegible]	[illegible]
Cloudy	77	31	11	[illegible]	20.0[illegible]
Fog	11	3	2		0.5[illegible]
Rain	44	13	[illegible]	[illegible]	[illegible]
Snow	31	9	[illegible]		[illegible]
TOTAL	418	161	7[illegible]	[illegible]	[illegible]

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	23	5	-	6	4.84
1- 5	136	21	2	35	27.12
6 - 10	85	34	4	41	20.55
11 - 20	91	20	8	43	22.62
21 - 30	42	22	13	25	11.05
31 - 40	24	18	16	19	7.25
41 - 50	9	8	8	4	2.94
51 - 60	7	7	11	1	2.42
61 - 70	1	2	2	-	0.52
Over 70	-	1	2	-	0.17
Not Reported	-	3	2	1	0.52
TOTAL	418	161	73	175	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON - CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	264	87	44	107	63.36
Wet	55	16	3	22	12.81
Muddy	1	-	-	-	0.18
Snowy	35	17	11	15	9.39
Icy	50	13	2	16	11.37
Not Reported	13	3	-	3	2.89
TOTAL	418	136	60	163	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	42	4	25	7.58
21 - 30	69	10	24	12.46
31 - 40	77	8	22	13.90
41 - 50	56	8	26	10.11
51 - 60	38	10	27	6.86
Over 60	28	9	10	5.05
Not Reported	244	11	29	44.04
TOTAL	554	60	163	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	487	52	152	87.91
Female	55	3	11	9.93
Not Reported	12	5	-	2.16
TOTAL	554	60	163	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	476	47	143	85.92
Not Familiar	6	-	-	1.08
Not Reported	72	13	20	13.00
TOTAL	554	60	163	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	3		3	0.52
Allegheny	68	8	22	11.75
Armstrong	9		6	1.55
Beaver	6		3	1.04
Bedford	3			0.52
Berks	8		8	1.38
Blair	5		1	0.86
Bradford	3	1	2	0.52
Bucks	5	1	1	0.86
Butler	8	1	1	1.38
Cambria	11		3	1.90
Cameron	1			0.17
Carbon	1			0.17
Centre	3	1		0.52
Chester	5		2	0.86
Clarion	3		1	0.52
Clearfield	12	2	3	2.07
Clinton	9		2	1.55
Columbia	9	2	3	1.55
Crawford	9	1	5	1.55
Cumberland	7		3	1.21
Dauphin	4		6	0.69
Delaware	25	8	2	4.32
Elk	9			1.55
Erie	19	3	4	3.28
Fayette	21	1	8	3.63
Forest				
Franklin	5	3	7	0.86
Fulton				
Greene				
Huntingdon	3	2		0.52
Indiana	10	1	3	1.73
Jefferson	6	2	3	1.04
McKean				

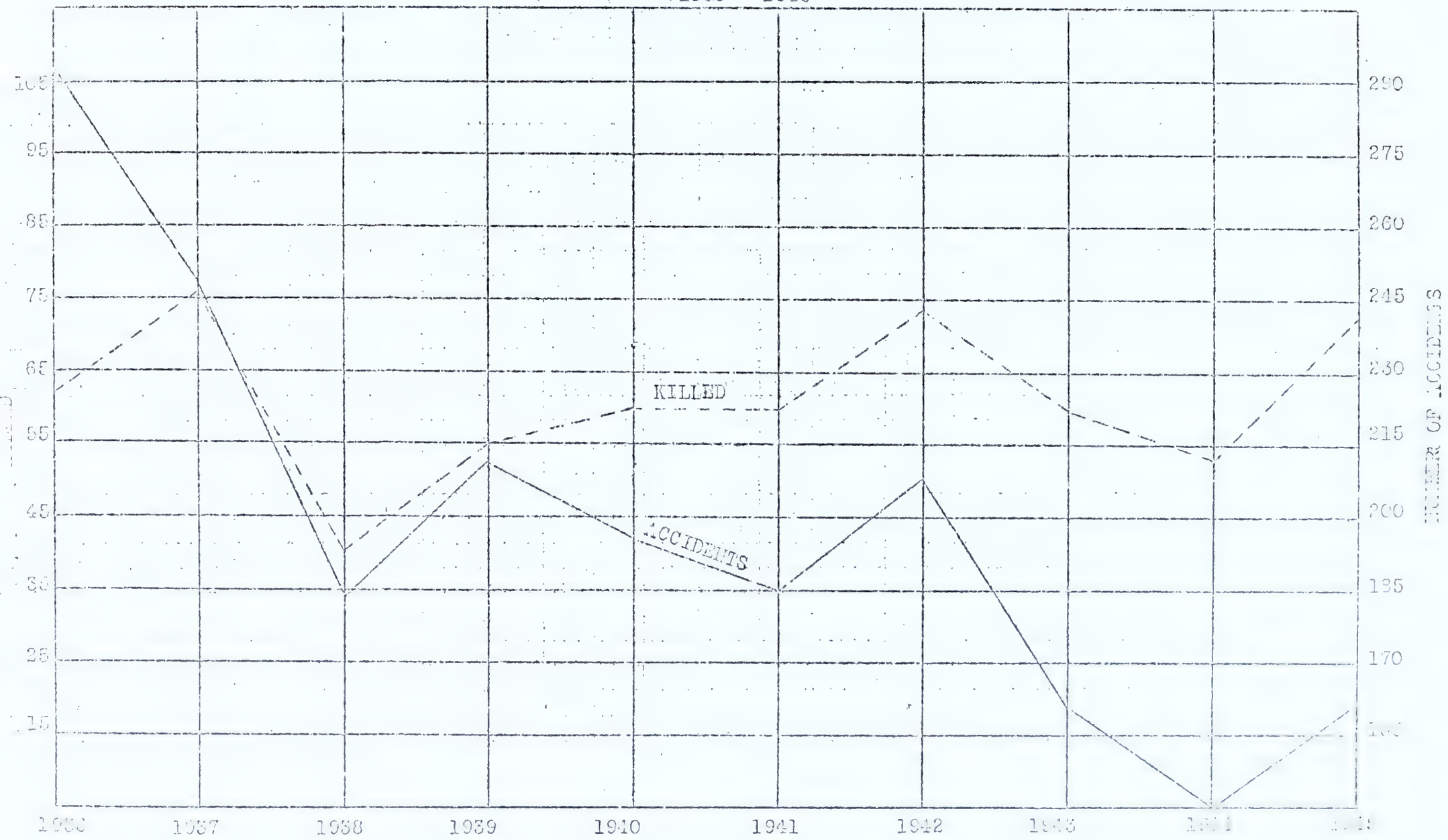
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	13	1	9	2.25
Lancaster	7	2	1	1.21
Lawrence	11		3	1.90
Lebanon	8		3	1.38
Lehigh	11	2	7	1.90
Luzerne	29		6	5.01
Lycoming	9		1	1.55
McKean	6			1.04
Mercer	12	3	3	2.07
Mifflin	7			1.21
Monroe	1		1	0.17
Montgomery	14	4	3	2.41
Montour	2		1	0.35
Northampton	6	1	1	1.04
Northumberland	19	3	1	3.28
Perry				
Philadelphia	17		3	2.94
Pike	2	1		0.35
Potter				
Schuylkill	15		3	2.59
Snyder				
Somerset	18	2	7	3.11
Sullivan	1			0.17
Susquehanna	3			0.52
Tioga	2		1	0.35
Union	10	1	1	1.73
Venango	5			0.86
Warren	9	1	2	1.55
Washington	19	5	8	3.28
Wayne	2			0.35
Westmoreland	17	5	1	2.94
Wyoming				
York	14		2	2.41
TOTAL	579	73	175	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1936 - 1945

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1936	11,764	669	62	378	1,913,193	3.50
1937	11,509	638	77	322	2,046,228	3.12
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,362	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS
AND NUMBER OF FATALITIES AT GRADE CROSSINGS
OVER STEAM RAILROADS IN PENNSYLVANIA
1936 - 1945



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
320	Collision with other vehicle	1	48		357			2	2	1	123		3	4	513	80.0	63.4
16	Collision with fixed object		5		19								2		26		3.2
113	Struck by taxicab				1			1	116				2	1	119	20.0	14.7
35	Running or walking into side of taxicab								35						35		4.3
8	Boarding or alighting (Standing vehicle)				8										8		1.0
10	Falling within vehicle				10										10		1.2
12	Caught by vehicle doors				22										22		2.7
7	Jumping on or off vehicle in motion				7										7		0.9
33	Sudden stop of vehicle				41				2						43		5.3
9	Defect or failure of equipment				14										14		1.7
3	Vehicle skidded				3										3		0.4
3	Highway defect				3										3		0.4
	Apparent reckless operation of vehicle																
6	Miscellaneous				6										6		0.8
585	TOTAL	1	53		471			3	155	1	123		7	5	809		
	Per Cent Killed	20.0						60.0		20.0						100.0	
	Per Cent Injured		6.6		58.2				19.1		15.2		0.9				100.0

K - Killed
I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
441	Collision with other vehicle		35	2	628			1	2	10	417	1	18	14	1100	40.0	54.2
80	Collision with fixed object		5	2	234				3		7		5	2	244	5.7	12.1
78	Struck by autobus				1			12	77			2	13	14	91	40.0	4.5
73	Running or walking into side of autobus				1			5	71				1	5	73	14.3	3.6
193	Boarding or alighting (Standing vehicle)		2		191								1		194		9.6
87	Falling within vehicle				91										91		4.5
57	Caught by vehicle doors				57										57		2.8
7	Jumping on or off vehicle in motion				4		3								7		0.3
54	Sudden stop of vehicle				58										58		2.8
27	Defect or failure of equipment		5		20				4		1				30		1.5
7	Vehicle skidded		3		15										18		0.9
19	Highway defect		5		14										19		0.9
	Apparent reckless operation of vehicle																
33	Miscellaneous		14		22				6				9		47		2.3
1100	TOTAL		69	4	1326		3	18	163	10	425	3	43	35	2030		
	Per Cent Killed			11.4				51.4		28.6		8.6				100.0	
	Per Cent Injured		3.4		65.4		0.1		8.0		21.0		2.1				100.0

K - Killed
I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY
SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
2	Collision with other vehicle		1		10					2				2	11	100.0	100.0
	Collision with fixed object																
	Struck by taxicab, autobus or truck																
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
2	TOTAL		1		10					2				2	11		
	Per Cent Killed									100.0						100.0	
	Per Cent Injured		9.1		90.9												100.0

K - Killed
I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
89	Collision with other vehicles	4	17		11					13	153		2	17	[illegible]	70.8	82.8
7	Collision with fixed object	1	6								1		1	1	8	4.2	3.6
13	Struck by taxicab, autobus or truck							3	9			1	1	4	10	16.7	4.5
3	Running or walking into side of taxicab, autobus or truck								3						3		1.4
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
3	Jumping on or off vehicle in motion		2				1								3		1.4
	Sudden stop of vehicle																
2	Defect or failure of equipment		2												2		0.9
	Vehicle skidded																
1	Highway defect		1												1		0.4
2	Apparent reckless operation of vehicle		3												3		1.4
8	Miscellaneous		5							2	3			2	3	[illegible]	2.3
124	TOTAL	5	36		11		1	3	12	15	157	1	4	[illegible]	[illegible]		
	Per Cent Killed	20.8						12.5		62.5		4.2				100.0	
	Per Cent Injured		16.3		5.0		0.4		5.4		71.1		1.8				[illegible]

K - Killed
I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
21	Collision with other vehicle	1	11							1	32			2	43	50.0	82.7
1	Collision with fixed object		1												1		1.9
8	Struck by taxicab, autobus or truck		1					2	4				1	2	6	50.0	11.6
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment		1												1		1.9
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
1	Miscellaneous								1						1		1.9
32	TOTAL	1	14					2	5	1	32		1	4	52		
	Per Cent Killed	25.0						50.0		25.0						100.0	
	Per Cent Injured		26.9						9.6		61.6		1.9				100.0

K - Killed
I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1943	2	59		508			6	197	2	208		13	10	985
1944		50	4	453			9	173		119		4	13	799
1945	1	53		471			3	155	1	123		7	5	809

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1943	2	35	5	1119		1	17	148	6	350	1	13	31	1672
1944	1	44	3	1343		4	14	163	7	356	1	12	26	1922
1945		69	4	1326		3	18	183	10	425	3	43	35	2029

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1943*														
1944*														
1945		1		10					2				2	11

* - No accidents reported during years of 1943 and 1944.

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1943	4	35	1	4		1	5	23	5	76	2	5	17	144
1944	2	26		4	2		5	12	6	103		2	15	147
1945	5	36		11		1	3	12	15	157	1	4	24	221

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1943	1	7						3	4	14		1	5	25
1944	1	6		1			6	6	2	23			9	36
1945	1	14					2	5	1	32		1	4	52

K - Killed
I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Transportation

1946

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
October 31, 1947

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Transportation

Harrisburg, Pennsylvania
October 31, 1947

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1946.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1946, the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	64	Gas	126
Street Railways	15	Water	480
Pipe Lines	6	Telephone	196
Ferries	16	Sewerage	14
Motor Boats	9	Canal	2
Steam Boats	2	Wharfage	3
Express	1	Bridge (Toll)	11
Common Carriers by Water	10	Telegraph	2
Bus - Scheduled Service	441	Steam Heat	28
Bus - Group and Party	219	Stock Yards	3
Taxi - Call and Demand	573	Airways	50
Truck - Common Carriers	7,612	Incline Plane	3
Electric	48		

Total - 9,934

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 831 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages, summarized on page 15, will show that in 1946 there was a substantial decrease in casualty accidents, involving all transportation utilities, while accidents involving service utilities increased. The summary which includes all utilities indicates that the total number of accidents decreased more than 10% during the year and that the number of fatalities was reduced more than 22% during the same period.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

Guy R. Johnson

Guy R. Johnson
Director of Bureau

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	3,324	255	3,387	32.55	59.72	27.68
Street Railway	4,282	73	5,377	41.94	17.10	43.94
Motor Transportation	1,729	62	2,610	16.93	14.52	21.33
Electric	483	24	464	4.73	5.62	3.79
Gas	180	9	189	1.76	2.11	1.54
Water	74	1	73	0.72	0.23	0.59
Telephone & Telegraph	123	-	125	1.21	-	1.02
Other Utilities	16	3	13	0.16	0.70	0.11
TOTAL	10,202 *	426 *	12,208 *	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	63	2616	2	283	5	134	7	443	1	164	1	65	-	106	1	13	80	3824	18.74	31.25
Trespasser	122	53	4	15	-	1	1	4	-	1	-	2	-	-	2	-	129	76	30.21	0.62
Other	4	134	4	24	2	23	15	15	-	9	-	5	-	17	-	-	25	227	5.85	1.85
Passenger, Patron or Consumer	12	369	3	3154	6	1525	1	2	8	15	-	1	-	2	-	-	30	5068	7.03	41.41
Pedestrian	15	10	46	611	25	301	-	-	-	-	-	-	-	-	-	-	86	922	20.14	7.54
Occupant Other Vehicle	39	205	14	1290	24	626	-	-	-	-	-	-	-	-	-	-	77	2121	18.03	17.33
TOTAL	255	3387	73	5377	62	2610	24	464	9	189	1	73	-	125	3	13	426 *	12208 *		
Per Cent Killed	59.72		17.10		14.52		5.62		2.11		0.23				0.70				100.00	
Per Cent Injured		27.68		43.94		21.33		3.79		1.54		0.59		1.02		0.11				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
173	Grade Crossings (for details-see appendix)	-	8	-	-	-	-	54	215	54	223	21.18	6.58
42	Collisions	4	57	-	-	-	-	-	5	4	62	1.57	1.83
18	Derailments	3	45	3	34	-	-	-	5	6	84	2.35	2.48
138	At station or loading platform	-	36	-	13	-	-	1	88	1	137	0.39	4.04
13	Defect or failure of roadway or equipment	-	12	-	1	-	-	-	-	-	13	-	0.38
91	Operating switches	-	91	-	-	-	-	-	-	-	91	-	2.69
94	Struck overhead or side obstruction	7	86	-	1	-	-	-	-	7	87	2.75	2.57
160	Repairing track or roadbed	-	164	-	-	-	-	-	-	-	164	-	4.84
169	Struck by flying missile, glass, etc.	-	157	-	10	-	-	-	3	-	170	-	5.02
119	Coupling or uncoupling	6	113	-	-	-	-	-	-	6	113	2.35	3.34
78	Falling on locomotive or car	-	60	-	16	-	-	-	2	-	78	-	2.30
409	Falling from locomotive or car	11	340	6	42	5	9	-	1	22	392	8.63	11.58
407	Getting on or off locomotive or car	-	290	1	106	1	5	-	5	2	406	0.78	11.99
235	Struck by locomotive or car	28	59	1	2	115	28	3	7	147	96	57.65	2.83
187	Operating hand brakes	1	186	-	-	-	-	-	-	1	186	0.39	5.[illegible]
385	Sudden starting or stopping of trains	-	358	-	106	-	1	-	11	-	476	-	14.06
6	Coming in contact with catenary wire	1	4	-	-	-	1	-	-	1	5	0.39	0.15
143	On or about locomotive	-	144	-	-	-	-	-	-	-	144	-	4.25
457	Miscellaneous	2	406	1	38	1	9	-	7	4	460	1.57	13.58
3324	TOTAL	63	2616	12	369	122	53	58	349	255	3387		
	Per Cent Killed	24.71		4.71		47.84		22.74				100.00	
	Per Cent Injured		77.24		10.89		1.57		10.30				100.00

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT	NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE *
COLLISIONS:			
MAIN TRACK 61			-46.49
YARD TRACK 565	626	27.13	+18.44
DERAILMENTS:			
MAIN TRACK 460			-35.30
YARD TRACK 722	1182	51.24	+10.91
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT	448	19.42	+18.21
MISCELLANEOUS	51	2.21	-28.17
TOTAL	2307	100.00	- 4.00

Note: 781 of the 1182 Derailments (66.1%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1944	2193	+ 0.64	$1,915,607	- 4.37
1945	2403	+ 9.58	$2,327,128	+ 21.48
1946	2307	- 4.16	$2,025,085	- 12.98

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE *
	1944	1945	1946		1944	1945	1946	
EMPLOYEES	120	111	63	- 43.24 %	2899	3087	2616	- 15.[illegible] %
PASSENGERS	6	20	12	- 40.00 %	380	433	369	- 1[illegible] %
TRESPASSERS	111	124	122	- 1.61 %	70	65	53	- 1[illegible] %
OTHERS **	70	86	58	- 32.56 %	288	320	3[illegible]	+ [illegible] %
TOTAL	307	341	255	- 25.22 %	3637	3905	3387	- 13.27 %

* Comparison of 1946 with 1945
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	2	93	3.17	3.55
Road Firemen	7	177	11.11	6.77
Road Conductors	7	157	11.11	6.00
Road Brakemen	10	412	15.87	15.75
Road Flagmen		47		1.80
Road Baggagemen		10		0.38
Yard Enginemen and Firemen		104		3.97
Yard Brakemen and Conductors	17	1099	26.98	42.01
Yard Switch Tenders	1	12	1.59	0.46
Crossing Watchmen		2		0.08
Track Walkers	1	6	1.59	0.23
Sectionmen and Work Train Laborers	9	199	14.29	7.60
Signalmen and Signal Maintainers		11		0.42
Station Baggagemen	1	8	1.59	0.31
Car Cleaners		7		0.27
Car Inspectors	4	10	6.35	0.38
Car Repairmen		7		0.27
Carpenters	1	5	1.59	0.19
Dining Car Employees		142		5.43
Miscellaneous	2	91	3.17	3.48
Employees Not on Duty	1	17	1.59	0.65
TOTAL	63	2616	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21	-	-	-	-	-	-	-	-	-	-	2	0.47
21 - 30	-	4	4.21	1	54	29.89	-	8	4.88	5	113	27.96
31 - 40	-	-	-	3	70	39.68	-	16	9.75	1	109	26.07
41 - 50	-	25	26.31	2	35	20.11	2	33	21.34	1	98	23.46
51 - 60	2	45	49.46	1	11	6.52	3	68	43.29	1	61	14.69
61	-	3	3.16	-	-	-	-	4	2.44	1	7	1.90
62	-	2	2.11	-	1	0.54	-	4	2.44	-	5	1.19
63	-	4	4.21	-	-	-	-	5	3.05	-	3	0.71
64	-	2	2.11	-	1	0.54	1	6	4.27	-	4	0.95
65	-	2	2.11	-	-	-	-	5	3.05	-	2	0.47
Over 65	-	3	3.16	-	-	-	1	6	4.27	1	2	0.71
Not Reported	-	3	3.16	-	5	2.72	-	2	1.22	-	6	1.42
TOTAL	2	93	100.00	7	177	100.00	7	157	100.00	10	412	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21	-	-	-	-	1	0.96	-	12	1.08	-	15	0.70
21 - 30	-	7	14.89	-	29	27.89	3	386	34.86	9	601	28.61
31 - 40	-	4	8.51	-	22	21.15	2	269	24.28	6	490	23.27
41 - 50	-	13	27.66	-	27	25.96	1	212	19.09	6	443	21.06
51 - 60	-	11	23.40	-	13	12.50	8	142	13.44	15	351	17.17
61	-	8	17.02	-	-	-	1	10	0.98	2	32	1.60
62	-	1	2.13	-	1	0.96	2	21	2.06	2	35	1.74
63	-	2	4.26	-	5	4.81	-	13	1.16	-	32	1.50
64	-	1	2.13	-	1	0.96	-	12	1.08	1	27	1.31
65	-	-	-	-	-	-	-	3	0.27	-	12	0.56
Over 65	-	-	-	-	3	2.89	-	9	0.81	2	23	1.17
Not Reported	-	-	-	-	2	1.92	-	10	0.89	-	28	1.31
TOTAL	-	47	100.00	-	104	100.00	17	1099	100.00	43	2089	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PERCENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
135	Collision of cars		23		473				3						499		9.3
1262	Collision of car and vehicle		45		541			14	1287		33		4	14	1910	19.2	35.5
612	Struck by car		4	3	8	3	4			45	537	4	20	55	573	75.3	10.7
9	Derailment of car		1		60										61		1.1
36	Contact with overhead or side obst.		1		66										67		1.2
1	Contact with trolley or feed wire or third rail					1								1		1.4	
75	Emergency stop		3		77										80		1.5
107	Defect of failure of roadway or eqp.		9		105						2				116		2.2
170	Caught by doors				172										172		3.2
219	Boarding standing car		3		220										223		4.1
572	Alighting from car		21		553										574		10.7
578	Falling within car		7		582										589		11.0
10	Jumping on or off car while in motion	1	1				9							1	10	1.4	.2
198	At elevated or subway platforms				198		1								199		3.7
32	Repair work on right of way		30		2						1				33		0.6
44	Struck by flying missile, glass, etc.		18		24		1				5				48		0.9
225	Miscellaneous	1	117		73					1	33			2	223	2.7	4.1
4282	TOTAL	2	283	3	3154	4	15	14	1290	46	611	4	24	73	5377		
	Per Cent Killed	2.7		4.1		5.5		19.2		63.0		5.5				100.00	
	Per Cent Injured		5.3		58.6		0.3		24.0		11.4		0.4				100.00

I-Injured
K-Killed

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1946 WITH 1945	YEAR			COMPARISON OF 1946 WITH 1945
	1944	1945	1946		1944	1945	1946	
Employees	6	4	2	- 50.00%	400	456	283	- 37.94%
Passengers	13	11	3	- 72.73%	3812	3652	3154	- 13.64%
Trespassers	9	9	4	- 55.55%	23	33	15	- 54.54%
Occupants of other vehicles	24	22	14	- 36.36%	1172	1223	1290	+ 5.18%
Pedestrians	44	63	46	- 26.98%	643	606	611	+ 0.82%
Others			4	-	36	37	24	- 35.14%
TOTAL	96	109	73	- 33.03%	6086	6007	5377	- 10.49%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
314	Collision with other Vehicle	5	93	6	880	-	-	2	9	24	613		2	37	1597	59.7	61.2
30	Collision with fixed object		12		82				1		6		6	-	107		4.1
243	Struck by auto-bus, taxicab or track		1		7			21	200			2	15	23	223	37.1	8.5
86	Running or walking into side of auto-bus, taxicab or truck							2	88					2	88	3.2	3.4
229	Boarding or alighting (Standing Vehicle)		2		228										230		8.8
68	Falling within vehicle				68										68		2.6
72	Caught by vehicle doors				73										73		2.8
13	Jumping on or off vehicle in motion				14		1								15		0.6
91	Sudden stop of vehicle				99				1						100		[illegible]
21	Defect or failure of equipment		3		26				2		6				37		1.4
6	Vehicle skidded		4		3						1				8		0.3
15	Highway defect		1		18										19		0.7
2	Apparent reckless operation of vehicle		1		1										2		0.1
39	Miscellaneous		17		26										43		1.7
1729	TOTAL	5	134	6	1525	-	1	25	301	24	626	2	23	62	2610		
	Per Cent Killed	8.1		9.7				40.3		38.7		3.2				100.0	
	Per Cent Injured		5.1		58.4		0.1		11.5		24.0		0.9				100.0

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	573	596	7	891	432	$116,490.05
Schedule Route (Bus Service)	441	1010	32	1,532	369	217,507.12
Group and Party (Bus Service)	219	8	---	38	3	4,300.00
Freight & Merchandise (Truck)	7612	96	21	120	111	122,149.37
Contract Carrier (Persons and Property)	831	19	2	29	32	35,445.00
TOTAL	9676	1729	62	2,610	947	$495,891.54

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1944	9,017	2,781	+10.53 %	63	-	2,904	+ 2.76%	$376,709.13	- 0.06 %
1945	9,331	2,872	+ 3.27 %	70	+ 11.11 %	3,122	+ 7.51%	511,146.82	+35.69 %
1946	9,676	2,676	- 6.82 %	62	- 11.43 %	2,610	-16.40%	495,891.54	- 2.98 %

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
49	Electric - Contact with charged wires or equipment	6	21	1	3	13	7	1		21	31	56.8	3.6
250	Falling - (Other than into water)		23[illegible]		3		14		3		250		28.9
259	Striking against or struck by objects		25[illegible]				3				260		30.1
90	Handling materials		90								90		10.4
1	Defect or failure of equipment or machinery		1								1		0.1
16	Involving use of tools - no defect	1	15							1	15	2.7	1.7
46	Automobile accident	1	30			1	14		3	2	47	5.4	5.5
4	Failure to use protective devices provided	1	3							1	3	2.7	0.4
39	Burns - not from electric source		36						7		43		5.0
8	Explosion		2				7	6	6	6	15	16.2	1.7
2	Drowning			2						2		5.4	
3	Asphyxiation							2	1	2	1	5.4	0.1
19	Infection from minor wounds		19								19		2.2
90	Miscellaneous	1	87		1	1	1			2	89	5.4	10.3
876	TOTAL	10	791	3	7	15	46	9	20	37	864		
	Per Cent Killed	27.1		8.1		40.5		24.3				100.00	
	Per Cent Injured		91.6		0.8		5.3		2.3				100.00

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1944	1945	1946	COMPARISON OF 1946 WITH 1945	1944	1945	1946	COMPARISON OF 1946 WITH 1945
EMPLOYEES	16	18	10	-2[illegible].00%	669	682	791	+1[illegible]
TRESPASSERS	2	3	3		4	6	7	+10.[illegible]
OTHERS	10	10	15	+50.00%	3[illegible]	28	46	+[illegible]
PATRONS OR CONSUMERS	13	9	9		2[illegible]	65	20	-[illegible]
TOTAL	41	35	37	+ 5.71%	730	781	864	+10.[illegible]

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
49	Electric - Contact with charged wires or equipment	6	21	1	3	13	7	1		21	31	87.4	6.7
126	Falling - (Other than into water)		121		1		4				126		27.2
157	Striking against or struck by objects		157				1				158		34.0
46	Handling materials		46								46		9.9
1	Defect or failure of equipment or machinery		1								1		0.2
11	Involving use of tools - no defect		11								11		2.4
15	Automobile accident		10			1	2		2	1	14	4.2	3.0
3	Failure to use protective devices provided	1	2							1	2	4.2	0.4
25	Burns - not from electric source		25								25		5.4
	Explosion												
	Drowning												
	Asphyxiation												
12	Infection from minor wounds		12								12		2.6
38	Miscellaneous		37			1	1			1	38	4.2	8.2
483	TOTAL	7	443	1	4	15	15	1	2	24	464		
	Per Cent Killed	29.1		4.2		62.5		4.2				100.0	
	Per Cent Injured	95.5		0.9		3.2		0.4				100.0	

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1944	10	389		1	9	15	3	3	22	408
1945	12	399	1	4	10	7	1	7	24	417
1946	7	443	1	4	15	15	1	2	24	464

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wire or equipment												
46	Falling - (Other than into water)	-	45				1				46		24.3
50	Striking against or struck by objects	-	50								50		26.5
22	Handling materials	-	22								22		11.6
	Defect or failure of equipment or machinery												
5	Involving use of tools -- no defect	1	4							1	4	11.1	2.1
8	Automobile accident		7				1		1		9		4.8
	Failure to use protective devices provided												
9	Burns--not from electric source		6						7		13		6.9
7	Explosion		1				7	6	6	6	14	66.7	7.4
	Drowning												
3	Asphyxiation							2	1	2	1	22.2	0.5
4	Infection from minor wounds		4								4		2.1
26	Miscellaneous		25		1						26		13.8
180	TOTAL	1	164	-	1	-	9	8	15	9	189		
	Per Cent Killed	11.1						88.9				100.0	
	Per Cent Injured		86.8		0.5		4.8		7.9				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1944	3	119		2		8	9	13	12	142
1945		126		2		3	7	54	7	185
1946	1	164		1		9	8	15	9	189

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSER		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
23	Falling--(Other than into water)		15		2		5		1		23		31.5
28	Striking against or struck by objects		28								28		38.3
13	Handling materials		13								13		17.8
	Defect or failure of equipment or machinery												
	Involving use of tools - no defect												
2	Automobile accident	1	1							1	1	100.0	1.4
	Failure to use protective devices provided												
	Burns--not from electric source												
	Explosion												
	Drowning												
	Asphyxiation												
1	Infection from minor wounds		1								1		1.4
7	Miscellaneous		7								7		9.6
74	TOTAL	1	65		2		5		1	1	73		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		89.0		2.7		6.9		1.4				100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1944	1	63	1			2			2	65
1945		55						1		56
1946	1	65	-	2		5		1	1	73

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
49	Falling - (Other than into water)	-	43			-	4		2		49		39.2
22	Striking against or struck by objects		20				2				22		17.6
8	Handling materials		8								8		6.4
	Defect or failure of equipment or machinery												
	Involving use of tools - no defect												
21	Automobile accident		12				11				23		18.4
	Failure to use protective devices provided												
5	Burns - not from electric source		5								5		4.0
	Explosion												
	Drowning												
	Asphyxiation												
2	Infection from minor wounds		2								2		1.6
16	Miscellaneous		16								16		12.8
123	TOTAL		106				17		2		125		
	Per Cent Killed												
	Per Cent Injured		84.8				13.6		1.6				100.0

K - Killed; I- Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1944	2	85		1		5		10	2	101
1945		86				16		3		105
1946		106				17		2		125

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Electric - Contact with charged wires or equipment												
6	Falling - (Other than into water)		6								6		46.1
2	Striking against or struck by objects		2								2		15.4
1	Handling materials		1								1		7.7
	Defect or failure of equipment or machinery												
	Involving use of tools - no defect												
	Automobile accident												
1	Failure to use protective devices provided		1								1		7.7
	Burns -- not from electric source												
1	Explosion		1								1		7.7
2	Drowning			2						2		66.7	
	Asphyxiation												
	Infection from minor wounds												
3	Miscellaneous	1	2							1	2	33.3	15.4
16	TOTAL	1	13	2						3	13		
	Per Cent Killed	33.3		66.7								100.0	
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1944		13	1		1	1	1		[illegible]	[illegible]
1945	1	16	2			2	1		[illegible]	18
1946	1	13	2						3	13

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipe Line and Steam Heating.

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES
COMPARED WITH ACCIDENTS IN 1944 AND 1945

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1946 WITH 1945	YEAR			COMPARISON OF 1946 WITH 1945	YEAR			COMPARISON OF 1946 WITH 1945
	1944	1945	1946		1944	1945	1946		1944	1945	1946	
Steam Railroad	3695	3833	3324	-13.28%	307	341	255	-25.22%	3037	3905	3387	-13.27%
Street Railway	4942	4987	4282	-14.14%	96	105	73	-33.33%	6086	6007	5377	-10.49%
Motor Transportation	2011	1903	1729	- 9.14%	63	70	62	-11.43%	2904	3122	2610	-16.[illegible]
Electric	418	435	483	+11.03%	22	24	24	-	408	417	461	+10.57%
Gas	149	158	180	+13.92%	12	7	9	+28.57%	142	186	159	+ [illegible]
Water	66	56	74	+32.14%	2	-	1	-	68	57	73	+[illegible]
Telephone & Telegraph	103	103	123	+19.42%	2	-	-	-	101	108	135	+[illegible]
Other Utilities	17	22	16	-27.27%	3	4	3	-25.00%	14	16	13	-27.[illegible]
TOTAL	11401	11406 *	10202 *	-10.56%	507	550 *	426 *	-22.54%	13357	13809 *	12[illegible] *	-1[illegible]

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX

DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2,155	19.61
Protected by trainmen	1,440	13.11
Total Protected	3,595	32.72
Unprotected	7,393	67.28
TOTAL CROSSINGS	10,988	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	489	13.6
Watchmen	335	9.3
Flashing light signals	1,162*	32.3
Other visual signals	34**	0.9
Bells	135	3.8
Trainmen	1,440	40.1
TOTAL	3,595	100.0

* - Additional protection by short arm gates at six crossings.
** - Includes nine crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	230	70	-	3	2	3	232	76	308	52.05
Protected by gates	20	6	-	9	1	2	21	17	38	6.42
Protected by watchmen	24	11	-	3	1	1	25	15	40	6.76
Protected by bells	11	1	-	-	-	-	11	1	12	2.03
Protected by visual signals	108	22	-	8	4	1	112	31	143	24.16
Protected by trainmen	33	15	-	-	1	2	34	17	51	8.61
Total Accidents at Protected Crossings	196	55	-	20	7	6	203	81	284	47.97
Total Accidents--Non Casualty	426		-		9		435			73.48
Total Accidents--Casualty		125		23		9		157		26.52
TOTAL ACCIDENTS	551		23		18				592	
Per Cent of Total Accidents	93.07		3.89		3.04				100.00	100.00

NC - Non-Casualty; C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos And Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	25	88	2	1	1	3	28	92	120	46.51
Protected by gates	2	6	6	3	1	3	9	12	21	8.14
Protected by watchmen	6	15	-	4	1	-	7	19	26	10.08
Protected by bells	-	1	-	-	-	-	-	1	1	0.39
Protected by visual signals	3	24	7	2	-	1	10	27	37	14.34
Protected by trainmen	-	27	-	-	-	26	-	53	53	20.54
TOTAL	36	161	15	10	3	33	54	204	258	100.00
Killed and injured at protected crossings	11	73	13	9	2	30	26	112	138	53.49
Per Cent of total Killed & Injured	76.36		9.09		13.95					100.00

K - Killed; I - Injured.

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1944, 1945 and 1946

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1944	2,166	27		
	1945	2,152	38	18.2	
	1946	2,155	26	31.6	40.7
UNPROTECTED	1944	8,892	26		
	1945	8,857	35	3.7	
	1946	8,833	28	20.0	34.6

			INJURED		
*PROTECTED	1944	2,166	70		
	1945	2,152	67	4.3	14.6
	1946	2,155	59	11.9	
UNPROTECTED	1944	8,892	109		
	1945	8,857	108	0.9	9.0
	1946	8,833	145		34.2

* - Not including those protected by trainmen.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1944	224	+ 10.9 %	20	- 25.9 %	83	+ 53.7 %
		1945	199	- 11.2 %	21	+ 5.0 %	63	- 24.1 %
		1946	211	+ 6.0 %	21	-	95	+ 50.8 %
	UNPROTECTED	1944	119	- 30.1 %	6	-	38	- 9.5 %
		1945	143	+ 20.2 %	12	+ 100.0 %	41	+ 7.9 %
		1946	147	+ 2.8 %	5	- 58.33%	39	- 4.9 %
RURAL	PROTECTED	1944	83	- 4.6 %	8	- 27.3 %	17	- 29.2 %
		1945	72	- 13.3 %	17	+ 112.5 %	19	+ 11.8 %
		1946	73	+ 1.4 %	5	- 70.6 %	17	- 10.5 %
	UNPROTECTED	1944	148	- 5.3 %	19	+ 18.7 %	41	-
		1945	165	+ 11.5 %	23	+ 21.0 %	52	+ 26.8 %
		1946	161	- 2.4 %	23	-	53	+ 1.9 %

* - Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1944, 1945 and 1946

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1944	266	5.3	
	1945	270		1.5
	1946	276		2.2
		PERSONS KILLED		
	1944	26	36.6	
	1945	35		34.6
	1946	30	14.3	
		PERSONS INJURED		
	1944	66	14.3	
	1945	80		21.2
	1946	83		3.7
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1944	308	0.6	
	1945	309		0.3
	1946	316		2.3
		PERSONS KILLED		
	1944	27		42.1
	1945	38		40.7
	1946	24	36.8	
		PERSONS INJURED		
	1944	113		31.5
	1945	95	15.9	
	1946	121		27.4

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	28	4.73	1	5
1 to 1:59 a.m.	20	3.38	-	13
2 to 2:59 a.m.	23	3.89	4	14
3 to 3:59 a.m.	11	1.86	2	4
4 to 4:59 a.m.	6	1.01	-	1
5 to 5:59 a.m.	9	1.52	-	1
6 to 6:59 a.m.	23	3.89	2	4
7 to 7:59 a.m.	22	3.72	2	3
8 to 8:59 a.m.	23	3.89	1	4
9 to 9:59 a.m.	23	3.89	4	5
10 to 10:59 a.m.	19	3.21	2	11
11 to 11:59 a.m.	18	3.04	2	1
Noon to 12:59 p.m.	23	3.89	2	6
1 to 1:59 p.m.	27	4.56	-	5
2 to 2:59 p.m.	22	3.72	2	18
3 to 3:59 p.m.	26	4.39	4	8
4 to 4:59 p.m.	29	4.89	8	10
5 to 5:59 p.m.	40	6.75	3	14
6 to 6:59 p.m.	46	7.77	2	27
7 to 7:59 p.m.	23	3.89	3	2
8 to 8:59 p.m.	33	5.57	3	16
9 to 9:59 p.m.	33	5.57	3	11
10 to 10:59 p.m.	35	5.91	4	12
11 to 11:59 p.m.	33	5.57	-	9
TOTAL	592	100.00	54	204

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	50	8.45	11	20
Monday	77	13.01	5	13
Tuesday	96	16.22	4	30
Wednesday	89	15.03	9	48
Thursday	99	16.72	9	39
Friday	97	16.38	6	23
Saturday	84	14.19	10	31
TOTAL	592	100.00	54	204

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	72	12.16	8	21
February	74	12.50	7	20
March	55	9.31	4	14
April	27	4.56	4	6
May	23	3.89	5	17
June	38	6.42	4	9
July	31	5.24	2	12
August	33	5.57	5	13
September	60	10.13	4	23
October	58	9.80	3	8
November	55	9.29	2	8
December	68	14.88	5	40
TOTAL	592	100.00	54	204

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURED 1944, 1945 and 1946

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1944	522	52	161
	1945	558	73	168
	1946	549	54	168
Public Siding	1944	35	1	16
	1945	11	-	-
	1946	33	-	33
Private Siding	1944	17	-	2
	1945	10	-	7
	1946	10	-	3
Private Grade Crossing (Private Road)	1944	88	8	24
	1945	75	5	7
	1946	80	-	19

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS 1944, 1945 and 1946

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1944	118	39	140
	1945	132	59	156
	1946	125	36	161
Pedestrians	1944	17	14	[illegible]
	1945	25	13	12
	1946	23	15	10
Streetcars Autobuses Taxicabs	1944	4	-	34
	1945	3	-	7
	1946	5	1	30
Bicycles Motorcycles Wagons	1944	1	-	1
	1945	1	1	-
	1946	4	2	3

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES 1944, 1945 and 1946

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Unprotected	1944	206	9.3	
	1945	229		11.2
	1946	232		1.3
Protected	1944	228		12.8
	1945	189	17.1	
	1946	203		7.4

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	1	1	6	0.65
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	-
Auto driven through lowered gates and struck by engine or train	1	-	6	0.65
Auto stalled on crossing and struck by engine or train	-	3	6	0.65
Auto struck by engine or train - gates not lowered	1	6	11	1.20
Auto struck by engine or train - gates out of order	-	-	1	0.11
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	29	86	257	28.07
Auto driven into side of engine or train moving over crossing	1	52	165	17.[illegible]
Auto driven into side of engine or train standing on crossing	1	8	31	3.37
Auto stalled on crossing and struck by engine or train	3	11	72	7.85
Total Accidents Involving Contact between Train and Auto	37	165	557	60.81
Auto colliding with crossing gates - No contact with train	-	1	342	37.21
Auto colliding with flashing light signal installations - No contact with trains	-	1	20	2.[illegible]
Total Accidents Involving Automobiles at Grade Crossings	37	167	919	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	59	34	25	24	15.71
Passenger train - reverse movement	1	-	-	-	0.17
Freight train - normal movement	243	92	25	114	50.56
Freight train - reverse movement	7	5	-	7	2.03
Freight train - car ahead of engine	19	3	-	3	3.72
Switching movement - engine normal ahead of draft	14	3	-	18	2.37
Switching movement - engine reverse ahead of draft	3	-	-	-	0.51
Switching movement - engine pushing cars	16	5	-	17	3.[illegible]
Light engine - normal movement	59	11	4	14	11.[illegible]2
Light engine - reverse movement	6	2	-	1	1.[illegible]
Motor track cars	6	2	-	3	1.[illegible]
Cars not attached	2	-	-	-	0.[illegible]
TOTAL	435	157	54	201	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1944, 1945 and 1946

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	505	1944	363*	0.719	2	8
	490	1945	341*	0.696	2	8
	489	1946	368*	0.740	2	7
Watchman	346	1944	36	0.104	4	7
	337	1945	29	0.086	-	3
	335	1946	35	0.104	6	15
Bells	141	1944	12	0.085	4	3
	136	1945	17	0.125	2	2
	135	1946	12	0.089	-	1
Visual Signals	1174	1944	177*	0.151	8	42
	1189	1945	155*	0.130	26	41
	1196	1946	150*	0.125	3	25
Trainmen	1439	1944	48	0.033	1	7
	1444	1945	31	0.021	-	11
	1440	1946	48	0.033	-	27

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1944	16	2	2
	1945	12	-	6
	1946	11	1	0
Gates out of order	1944	1	-	-
	1945	1	-	-
	1946	1	-	-
Persons passing under or around lowered gates	1944	5	2	3
	1945	11	5	0
	1946	8	6	2
Automobile driven through lowered gates striking or being struck by train	1944	7	-	3
	1945	14	2	4
	1946	12	2	1
Unassigned	1944	7	-	-
	1945	6	-	-
	1946	0	-	3

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1944, 1945 and 1946

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1944	332	6.0	
	1945	310	6.6	
	1946	342		10.3
Flashing light signals struck and damaged	1944	21		10.7
	1945	23		9.6
	1946	20	13.0	

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES ----- 1937 - 1946

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1937	45	4	39
1938	31	1	26
1939	32	-	24
1940	46	4	13
1941	42	2	20
1942	55	3	22
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	305	114	36	154	70.78
Cloudy	80	22	12	16	17.33
Fog	15				2.53
Rain	26	17	2	30	7.10
Snow	9	4	4	2	2.20
TOTAL	435	157	54	204	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE
CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	26	5	1	6	5.24
1 - 5	157	31	2	73	31.76
6 - 10	95	26	5	32	20.44
11 - 20	79	38	11	40	19.76
21 - 30	44	28	10	37	12.16
31 - 40	16	12	7	10	4.73
41 - 50	11	10	12	4	3.55
51 - 60	3	1	1		0.67
61 - 70	2	4	3	2	1.01
Over 70	1	1	1		0.34
Not Reported	1	1	1		0.34
TOTAL	435	157	54	204	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE
CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	314	100	32	145	78.03
Wet	42	18	3	30	10.54
Muddy	1	1		1	0.35
Snowy	12	3	3	2	2.64
Icy	12	5		7	2.99
Not Reported	24	7	1	9	5.45
TOTAL	435	134	39	194	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	42	6	18	7.38
21 - 30	104	9	51	18.28
31 - 40	79	5	41	13.88
41 - 50	57	5	18	10.02
51 - 60	32	6	17	5.62
Over 60	24	4	12	4.22
Not Reported	231	4	37	40.60
TOTAL	569	39	194	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	513	37	178	90.16
Female	41	2	13	7.20
Not Reported	15		3	2.64
TOTAL	569	39	194	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE
CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	465	38	156	81.72
Not Familiar	13			2.[illegible]
Not Reported	91	1	38	15.[illegible]
TOTAL	569	39	194	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	12	1	-	2.03
Allegheny	48	6	9	8.11
Armstrong	4	-	-	0.68
Beaver	2	-	-	0.34
Bedford	3	2	4	0.51
Berks	8	1	3	1.35
Blair	4	-	-	0.68
Bradford	3	2	-	0.51
Bucks	6	1	2	1.01
Butler	14	1	12	2.36
Cambria	12	-	1	2.03
Cameron	-	-	-	-
Carbon	1	-	-	0.17
Centre	3	-	-	0.51
Chester	9	-	-	1.52
Clarion	5	-	1	0.84
Clearfield	23	1	5	3.89
Clinton	6	1	-	1.01
Columbia	14	1	3	2.36
Crawford	8	1	1	1.35
Cumberland	7	-	2	1.18
Dauphin	6	-	-	1.01
Delaware	16	2	5	2.70
Elk	8	-	1	1.35
Erie	23	4	5	3.89
Fayette	25	-	6	4.22
Forest	2	1	-	0.34
Franklin	7	1	5	1.18
Fulton	-	-	-	-
Green	-	-	-	-
Huntingdon	-	-	-	-
Indiana	11	-	8	1.86
Jefferson	3	-	1	0.51
Juniata	-	-	-	-

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	14	1	15	2.36
Lancaster	11	2	3	1.[illegible]
Lawrence	6	1	-	1.01
Lebanon	3	-	1	0.51
Lehigh	6	-	1	1.01
Luzerne	22	4	1[illegible]	3.72
Lycoming	17	3	12	2.87
McKean	10	3	2	1.[illegible]
Mercer	7	1	2	1.18
Mifflin	6	-	-	1.01
Monroe	2	-	1	0.34
Montgomery	14	6	2	2.36
Montour	3	-	1	0.51
Northampton	7	-	2	1.1[illegible]
Northumberland	30	-	7	5.07
Perry	-	-	-	-
Philadelphia	18	-	32	3.04
Pike	-	-	-	-
Potter	-	-	-	-
Schuylkill	20	1	6	3.3[illegible]
Snyder	1	-	-	0.17
Somerset	9	-	4	1.52
Sullivan	-	-	-	-
Susquehanna	3	-	-	0.[illegible]
Tioga	3	-	2	0.51
Union	5	-	2	0.[illegible]
Venango	4	-	-	0.[illegible]
Warren	5	-	2	0.84
Washington	20	1	3	3.38
Wayne	-	-	-	-
Westmoreland	33	3	2	5.57
Wyoming	2	1	1	0.3[illegible]
York	1[illegible]	1	5	3.[illegible]
TOTAL	592	54	204	100.00

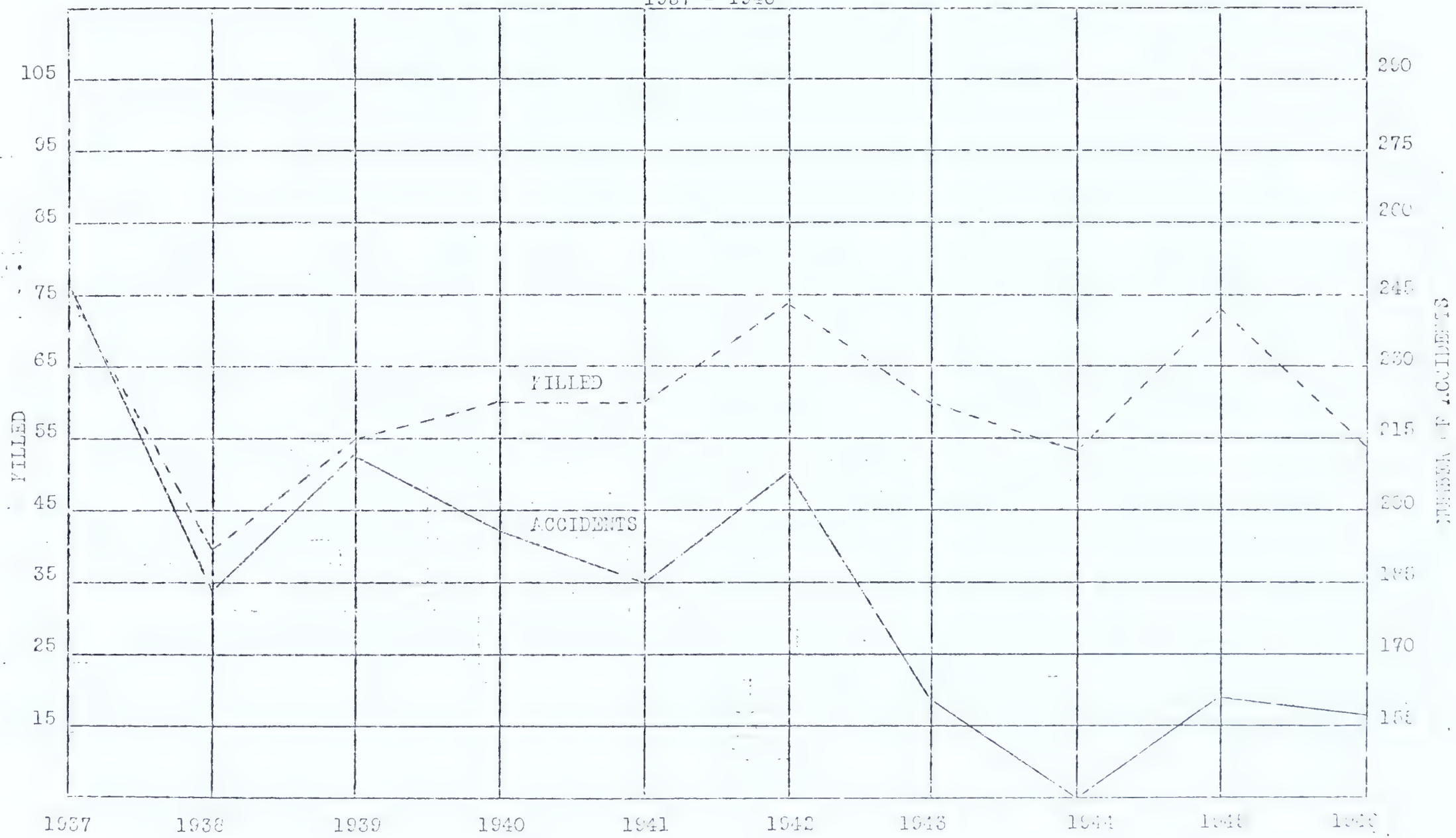
TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1937 - 1946

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED *	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1937	11,509	638	77	322	2,045,228	3.12
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	69	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,362	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	11,088	592	54	204	2,305,507	2.57

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA

1937 - 1946



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
351	Collision with other vehicle	1	41	2	364				4	1	215		1	4	626	57.1	70.4
4	Collision with fixed object		1		15										16		1.7
109	Struck by taxicab				6			2	99				2	2	107	28.6	12.0
53	Running or walking into side of taxicab							1	53					1	53	14.3	5.9
14	Boarding or alighting (Standing vehicle)				14										14		1.6
4	Falling within vehicle				4										4		0.5
14	Caught by vehicle doors				14										14		1.6
9	Jumping on or off vehicle in motion				10		1								11		1.2
27	Sudden stop of vehicle				32				1						33		3.7
2	Defect or failure of equipment				2										2		0.2
1	Vehicle skidded		1												1		0.1
4	Highway defect				4										4		0.5
	Apparent reckless operation of vehicle																
4	Miscellaneous				4										4		0.5
596	TOTAL	1	46	2	469		1	3	157	1	215		3	7	891		
	Per Cent Killed	14.3		28.6				42.8		14.3						100.0	
	Per Cent Injured		5.2		52.6		0.1		17.6		24.1		0.4				100.0

K - Killed
I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
386	Collision with other vehicle		26	3	168			2	3	10	332			15	829	46.9	54.1
19	Collision with fixed object		5		67				1		2		5		80		5.2
109	Struck by autobus				1			15	36			1	9	16	96	50.0	6.2
30	Running or walking into side of autobus							1	32					1	32	3.1	2.1
215	Boarding or alighting (Standing vehicle)		2		214										216		14.1
64	Falling within vehicle				64										64		4.2
58	Caught by vehicle doors				59										59		3.8
4	Jumping on or off vehicle in motion				4										4		0.3
63	Sudden stop of vehicle				66										66		4.3
18	Defect or failure of equipment		2		24				2		6				34		2.2
1	Vehicle skidded		1												1		0.1
10	Highway defect		1		13										14		0.9
1	Apparent reckless operation of vehicle				1										1		0.1
32	Miscellaneous		14		22										36		2.4
1010	TOTAL		51	3	1003			18	124	10	340	1	14	32	1532		
	Per Cent Killed			9.4				56.2		31.3		3.1				100.0	
	Per Cent Injured		3.3		65.5				8.1		22.2		.9				100.0

K - Killed
I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
4	Collision with other vehicle		1		30						1				32		84.3
	Collision with fixed object																
1	Struck by autobus												1		1		2.6
	Running or walking into side of autobus																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
1	Sudden stop of vehicle				1										1		
	Defect or failure of equipment																
1	Vehicle skidded				3										3		7.9
1	Highway defect				1										1		2.6
	Apparent reckless operation of vehicle																
	Miscellaneous																
8	TOTAL		1		35						1		1		38		
	Per Cent Killed																
	Per Cent Injured		2.6		92.2						2.6		2.6				100.0

K - Killed
I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
60	Collision with other vehicles	4	17	1	10				2	11	56		1	16	86	76.2	71.7
6	Collision with fixed object		4								4		1		9		7.5
13	Struck by truck		1					4	11			1	2	5	14	23.8	11.7
3	Running or walking into side of truck								3						3		2.5
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment		1												1		0.8
3	Vehicle skidded		2								1				3		2.5
	Highway defect																
1	Apparent reckless operation of vehicle		1												1		0.8
3	Miscellaneous		3												3		2.5
96	TOTAL	4	29	1	10			4	16	11	61	1	4	21	120		
	Per Cent Killed	19.0		4.8				19.0		52.4		4.8				100.0	
	Per Cent Injured		24.2		8.3				13.3		50.9		3.3				100.0

K - Killed
I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
13	Collision with other vehicle		5		8					2	9			2	22	100.0	75.9
1	Collision with fixed object		2												2		6.9
5	Struck by taxicab, autobus or truck								4				1		5		17.2
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
19	TOTAL		7		8				4	2	9		1	2	29		
	Per Cent Killed									100.0						100.0	
	Per Cent Injured		24.1		27.6				13.8		31.0		3.5				100.0

K - Killed
I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1944		50	4	453			9	173		119		4	13	799
1945	1	53		471			3	155	1	123		7	5	809
1946	1	46	2	469		1	3	157	1	215		3	7	891

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1944	1	44	3	1343		4	14	163	7	356	1	12	26	1922
1945		69	4	1326		3	18	163	10	425	3	43	35	2029
1946		51	3	1003			18	124	10	310	1	14	32	1532

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1944*														
1945		1		10					2				2	11
1946		1		35						1		1		38

* - No accidents reported during 1944.

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1944	2	26		4	2		5	12	6	103		2	15	147
1945	5	36		11		1	3	12	15	157	1	4	24	221
1946	4	29	1	10			4	16	11	61	1	4	21	120

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1944	1	6		1			6	6	2	23			9	36
1945	1	14					2	5	1	32		1	4	52
1946		7		8				4	2	9		1	2	29

K - Killed
I - Injured

DOCUMENTS SECTION

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Transportation

1947

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
October 11, 1948

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Bureau of Transportation

Harrisburg, Pennsylvania
October 11, 1948

To the Honorable

Pennsylvania Public Utility Commission

Harrisburg, Pennsylvania

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1947.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1947, the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	63	Bridge (Toll)	11
Street Railways	12	Canal	2
Ferries	17	Electric	48
Motorboats	10	Gas (Artificial)	39
Steamboats	2	Gas (Natural)	83
Express	1	Pipe Lines	7
Common Carriers by water	10	Sewerage	15
Bus - Scheduled Service	463	Steam Heat	27
Bus - Group and Party	244	Telegraph	2
Taxi - Call and Demand	697	Telephone	192
Truck - Common Carrier	8517	Water	485
Airways	88	Wharfage	3
Incline Plane	3	Stock Yards	3
Total Transportation Utilities			10,127
Total Service Utilities			917
Total			11,044

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 837 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $150 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Data pertaining to accidents involving service utilities appearing in Tables 1, 2 and 14 to 26, inclusive, have been supplied by R. A. McShea, Jr., Director, Bureau of Rates and Research.

Reference to the following pages, summarized on page 15, will show that in 1947 there was a slight decrease in casualty accidents involving all transportation utilities, while accidents involving service utilities increased. The summary which includes all utilities indicates that the total number of accidents decreased more than 2% during the year and that the number of fatalities was increased more than 2% during the same period.

The attached report is submitted for the consideration of the Commission.

Respectfully submitted,

Guy R. Johnson
Director of Bureau

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	2946	264	3061	29.61	60.41	25.66
Street Railway	4068	66	4959	40.89	15.10	41.58
Motor Transportation	1948	62	2940	19.58	14.19	24.65
Electric	592	36	565	5.95	8.24	4.74
Gas	183	5	184	1.84	1.14	1.54
Water	67	2	69	.67	.46	.58
Telephone & Telegraph	122	-	126	1.23	-	1.06
Other Utilities	23	2	23	.23	.46	.19
TOTAL	9942*	437	11918*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	75	2242	3	272	4	139	12	532	1	170	-	69	-	102	-	21	95	3547	21.74	29.74
Trespasser	106	65	9	14	-	-	1	6	-	1	-	-	-	1	2	-	118	87	27.00	.73
Other	14	130	1	63	1	37	22	24	-	3	-	-	-	19	-	2	38	278	8.70	2.33
Passenger, Patron or Consumer	21	434	8	3010	2	1724	1	3	4	10	2	-	-	4	-	-	38	5185	8.70	43.47
Pedestrian	12	11	31	497	18	371	-	-	-	-	-	-	-	-	-	-	61	879	13.96	7.37
Occupant Other Vehicle	36	179	14	1103	37	669	-	-	-	-	-	-	-	-	-	-	87	1951	19.90	16.36
TOTAL	264	3061	66	4959	62	2940	36	565	5	184	2	69	-	126	2	23	437	11918*		
Per Cent Killed	60.41		15.10		14.19		8.24		1.14		.46				.46				100.00	
Per Cent Injured		25.66		41.58		24.65		4.74		1.54		.58		1.06		.19				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYERS		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
172	Grade Crossings (for details-see appendix)	2	4	-	-	-	-	48	190	50	194	18.94	6.34
41	Collisions	6	56	-	70	-	-		7	6	133	2.27	4.35
27	Derailments	7	34	13	112	-	-	7	6	27	152	10.23	4.97
97	At station or loading platform	-	17	-	30	-	-	-	51	-	98	-	3.20
8	Defect or failure of roadway or equipment	-	8	5	10	-	-	-	-	5	18	1.89	.59
98	Operating switches	-	98	-	-	-	-	-	-	-	98	-	3.20
84	Struck overhead or side obstruction	5	75	-	2	1	1	-	-	6	78	2.27	2.55
154	Repairing track or roadbed	-	154	-	-	-	-	-	-	-	154	-	5.03
139	Struck by flying missile, glass, etc.	-	123	-	14	1	-	-	4	1	141	.38	4.61
94	Coupling or uncoupling	4	90	-	-	-	-	-	-	4	90	1.51	2.94
75	Falling on locomotive or car	-	51	-	20	-	-	-	4	-	75	-	2.45
308	Falling from locomotive or car	13	248	2	29	3	10	-	4	18	291	6.82	9.51
381	Getting on or off locomotive or car	-	272	-	98	1	6	-	6	1	382	.38	12.48
245	Struck by locomotive or car	33	60	1	1	99	42	7	5	140	108	53.03	3.53
136	Operating hand brakes	-	136	-	-	-	-	-	-	-	136	-	4.44
274	Sudden starting or stopping of trains	2	249	-	26	-	1	-	21	2	297	.76	9.70
3	Coming in contact with catenary wire	1	1	-	-	1	-	-	-	2	1	.76	.03
112	On or about locomotive	1	114	-	-	-	-	-	-	1	114	.38	3.72
498	Miscellaneous	1	452	-	22	-	5	-	22	1	501	.38	16.36
2946	TOTAL	75	2242	21	434	106	65	62	320	264	3061		
	Per Cent Killed	28.41		7.96		40.15		23.48				100.00	
	Per Cent Injured		73.25		14.18		2.12		10.45				100.00

*- "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I- Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $150 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE *
COLLISIONS:				
MAIN TRACK	64			+ 4.92
YARD TRACK	533	597	23.92	- 5.66
DERAILMENTS:				
MAIN TRACK	505			+ 9.78
YARD TRACK	849	1354	54.24	+17.59
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		499	19.99	+11.38
MISCELLANEOUS		46	1.85	- 9.80
TOTAL		2496	100.00	+ 8.19

Note: 944 of the 1354 Derailments (69.7%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $150 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1945	2403	+9.58	$2,327,128	+21.48
1946	2307	-4.16	$2,025,085	-12.98
1947	2496	+8.19	$2,512,437	+24.06

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE*
	1945	1946	1947		1945	1946	1947	
EMPLOYEES	111	63	75	+19.05	3087	2616	2242	-14.30
PASSENGERS	20	12	21	+75.00	433	369	434	+17.61
TRESPASSERS	124	122	106	-13.11	65	53	65	+22.64
OTHERS **	86	58	62	+ 6.90	820	349	320	- 8.31
TOTAL	341	255	264	+ 3.53	3905	3387	3061	- 9.62

* Comparison of 1947 with 1946
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	13	93	17.33	4.15
Road Firemen	3	137	4.00	6.11
Road Conductors	3	161	4.00	7.18
Road Brakemen	5	337	6.67	15.03
Road Flagmen	1	42	1.33	1.87
Road Baggagemen		11		.49
Yard Enginemen and Firemen	1	113	1.33	5.04
Yard Brakemen and Conductors	22	889	29.34	39.65
Yard Switch Tenders		11		.49
Crossing Watchmen		3		.13
Track Walkers	1	5	1.33	.22
Sectionmen and Work Train Laborers	13	188	17.33	8.39
Signalmen and Signal Maintainers	1	13	1.33	.58
Station Baggagemen		10		.45
Car Cleaners		4		.18
Car Inspectors	4	20	5.34	.89
Car Repairmen	1	13	1.33	.58
Carpenters		5		.22
Dining Car Employees		78		3.48
Miscellaneous	5	79	6.67	3.53
Employees Not on Duty	2	30	2.67	1.34
TOTAL	75	2242	100.00	100.00

TABLE 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21	-	-	-	-	-	-	-	-	-	-	-	-
21 - 30	-	3	2.83	2	39	29.29	-	6	3.65	2	88	26.32
31 - 40	-	1	.94	-	54	38.57	-	10	6.10	2	75	22.52
41 - 50	1	26	25.47	1	31	22.86	-	27	16.46	-	84	24.56
51 - 60	6	32	35.85	-	8	5.72	2	81	50.61	1	63	18.71
61	1	4	4.72	-	3	2.14	1	10	6.71	-	5	1.46
62	-	6	5.66	-	-	-	-	6	3.66	-	7	2.05
63	-	5	4.72	-	1	.71	-	5	3.05	-	2	.58
64	-	5	4.72	-	-	-	-	5	3.05	-	5	1.46
65	3	5	7.55	-	-	-	-	3	1.83	-	3	.88
Over 65	2	5	6.60	-	-	-	-	5	3.05	-	1	.29
Not Reported	-	1	.94	-	1	.71	-	3	1.83	-	4	1.17
TOTAL	13	93	100.00	3	137	100.00	3	161	100.00	5	337	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21	-	-	-	-	3	2.63	-	3	.33	-	6	.33
21 - 30	1	7	18.61	-	28	24.56	7	341	38.19	12	512	28.79
31 - 40	-	8	18.61	-	22	19.29	2	188	20.86	4	358	19.89
41 - 50	-	10	23.25	-	20	17.54	4	161	18.11	6	359	20.05
51 - 60	-	10	23.25	1	26	23.68	5	143	16.25	15	363	20.77
61	-	-	-	-	4	3.51	1	5	.66	3	31	1.87
62	-	1	2.32	-	2	1.76	1	3	.44	1	25	1.43
63	-	1	2.32	-	-	-	-	10	1.09	-	24	1.32
64	-	2	4.66	-	1	.88	2	10	1.32	2	28	1.65
65	-	2	4.66	-	2	1.76	-	5	.55	3	20	1.26
Over 65	-	-	-	-	3	2.63	-	6	.66	2	20	1.21
Not Reported	-	1	2.32	-	2	1.76	-	14	1.54	-	26	1.48
TOTAL	1	42	100.00	1	113	100.00	22	889	100.00	48	1772	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
101	Collision of cars	1	14	1	346	-	-	-	1	-	-	-	-	2	361	3.0	7.3
1153	Collision of car and vehicle	-	31	1	554	-	-	14	1097	1	12	-	29	16	1723	24.3	34.7
537	Struck by car	2	-	5	7	9	1	-	-	30	464	1	29	47	501	71.2	10.1
28	Derailment of car	-	1	-	58	-	-	-	1	-	4	-	-	-	64	-	1.3
9	Contact with overhead or side obst.	-	1	-	17	-	1	-	-	-	-	-	-	-	19	-	.4
-	Contact with trolley or feed wire or third rail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
112	Sudden stop	-	4	-	115	-	-	-	-	-	1	-	-	-	120	-	2.4
39	Defect or failure of roadway or eqp.	-	14	-	20	-	-	-	4	-	2	-	1	-	41	-	.8
268	Caught by doors	-	-	-	269	-	-	-	-	-	-	-	-	-	269	-	5.4
190	Boarding standing car	-	9	-	181	-	-	-	-	-	-	-	-	-	190	-	3.8
529	Alighting from car	-	15	-	515	-	2	-	-	-	-	-	-	-	532	-	10.7
530	Falling within car	-	6	-	529	-	-	-	-	-	-	-	-	-	535	-	10.8
8	Jumping on or off car while in motion	-	-	-	3	-	5	-	-	-	-	-	-	-	8	-	.2
206	At elevated or subway platforms	-	1	1	203	-	-	-	-	-	2	-	3	1	209	1.5	4.3
74	Repair work on right of way	-	74	-	-	-	-	-	-	-	-	-	-	-	74	-	1.5
43	Struck by flying missile, glass, etc.	-	11	-	34	-	-	-	-	-	-	-	-	-	45	-	.9
241	Miscellaneous	-	91	-	159	-	5	-	-	-	12	-	1	-	268	-	5.4
4068	TOTAL	3	272	8	3010	9	14	14	1103	31	497	1	63	66	4959		
	Per Cent Killed	4.6		12.1		13.6		21.2		47.0		1.5				100.0	
	Per Cent Injured		5.5		60.7		0.3		22.2		10.0		1.3				100.0

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1947 WITH 1946	YEAR			COMPARISON OF 1947 WITH 1946
	1945	1946	1947		1945	1946	1947	
Employees	4	2	3	+ 50.00	456	283	272	- 3.89
Passengers	11	3	8	+166.66	3652	3154	3010	- 4.56
Trespassers	9	4	9	+125.00	33	15	14	- 6.66
Occupants of other vehicles	22	14	14	-	1223	1290	1103	- 14.50
Pedestrians	63	46	31	- 32.60	606	611	497	- 18.66
Others	-	4	1	- 75.00	37	24	63	+162.50
TOTAL	109	73	66	- 9.59	6007	5377	4959	- 7.77

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
874	Collision with other vehicle	-	93	1	940	-	-	-	6	37	666	-	4	38	1709	61.3	58.1
50	Collision with fixed object	3	18	1	116	-	-	-	1	-	2	-	1	4	138	6.5	4.7
186	Struck by auto-bus, taxicab or truck	1	-	-	1	-	-	17	150	-	-	1	27	19	178	30.6	6.1
178	Running or walking into side of auto-bus, taxicab or truck	-	-	-	-	-	-	1	180	-	-	-	-	1	180	1.6	6.1
313	Boarding or alighting (standing vehicle)	-	1	-	285	-	-	-	26	-	-	-	2	-	314	-	10.7
104	Falling within vehicle	-	-	-	107	-	-	-	-	-	-	-	-	-	107	-	3.6
57	Caught by vehicle doors	-	-	-	57	-	-	-	1	-	-	-	-	-	58	-	2.0
4	Jumping on or off vehicle in motion	-	-	-	4	-	-	-	-	-	-	-	-	-	4	-	0.1
104	Sudden stop of vehicle	-	3	-	119	-	-	-	3	-	-	-	-	-	125	-	4.2
29	Defect or failure of equipment	-	5	-	63	-	-	-	3	-	1	-	1	-	73	-	2.5
4	Vehicle skidded	-	-	-	7	-	-	-	-	-	-	-	-	-	7	-	.2
2	Highway defect	-	-	-	2	-	-	-	-	-	-	-	-	-	2	-	.1
2	Apparent reckless operation of vehicle	-	2	-	-	-	-	-	-	-	-	-	-	-	2	-	.1
41	Miscellaneous	-	17	-	23	-	-	-	1	-	-	-	2	-	43	-	1.5
1948	TOTAL	4	139	2	1724	-	-	18	371	37	669	1	37	62	2940		
	Per Cent Killed	6.5		3.2				29.0		59.7		1.6				100.0	
	Per Cent Injured		4.7		58.6				12.6		22.8		1.3				100.0

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	697	533	8	797	546	$137,608.26
Schedule Route (Bus Service)	463	1250	30	1915	447	263,123.43
Group and Party (Bus Service)	244	6	2	10	5	10,585.00
Freight & Merchandise (Truck)	8517	121	20	170	146	191,048.55
Contract Carrier (Persons and Property)	837	38	2	48	37	35,231.35
TOTAL	10758	1948	62	2940	1181	$637,596.59

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

		CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
YEAR	NUMBER OF REGULATED OPERATORS	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1945	9,331	2,872	+ 3.27%	70	+11.11%	3,122	+ 7.51%	$511,146.82	+35.69%
1946	9,676	2,676	- 6.82%	62	-11.43%	2,610	-16.40%	495,891.54	- 2.98%
1947	10,758	3,129	+16.93%	62	-	2,940	+12.64%	637,596.59	+28.58%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
7	Asphyxiation		2					3	4	3	6	6.7	0.6
45	Automobile accident		39				14		1		54		5.6
45	Burns - not from electric source		43		2				1		46		4.8
13	Defect or failure of equipment or machines		13								13		1.3
5	Drowning			3		3		2		8		17.8	
61	Electric - Contact with charged wires or equipment	6	23		2	17	14	1	2	24	41	53.3	4.2
10	Explosion		7					1	4	1	11	2.2	1.1
2	Failure to use protective devices provided		2								2		0.7
190	Falling - (Other than in water)	3	174		2	2	9		2	5	187	11.1	19.3
137	Handling materials		137								137		14.2
11	Infection from minor wounds		11								11		1.1
131	Involving use of tools - no defect	1	130							1	130	2.2	13.5
163	Miscellaneous	1	159		1		1		2	1	163	2.2	16.9
167	Striking against or struck by objects	2	154		1		10		1	2	166	4.5	17.2
987	TOTAL	13	894	3	6	22	48	7	17	45	967		
	Per Cent Killed	28.9		6.7		48.9		15.5				100.0	
	Per Cent Injured		92.5		0.8		5.0		1.7				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1945	1946	1947	COMPARISON OF 1947 WITH 1946	1945	1946	1947	COMPARISON OF 1947 WITH 1946
EMPLOYEES	13	10	13	+30.00%	682	791	894	+13.02%
TRESPASSERS	3	3	2	-33.33%	6	7	8	+14.29%
OTHERS	10	15	22	+46.67%	28	46	48	+ 4.35%
PATRONS OR CONSUMERS	9	9	7	-22.22%	65	20	17	-15.00%
TOTAL	35	37	44	+18.92%	781	864	967	+11.92%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
24	Automobile accident		23				1				24		4.2
29	Burns - not from electric source		28		2						30		5.3
4	Defect or failure of equipment or machinery		4								4		0.7
3	Drowning			1		3				4		11.1	
57	Electric - Contact with charged wires or equipment	6	20		2	17	13	1	2	24	37	66.7	6.5
2	Explosion		2								2		0.4
2	Failure to use protective devices provided		2								2		0.4
107	Falling - (Other than in water)	2	99		1	2	4		1	4	105	11.1	18.6
63	Handling materials		63								63		11.2
7	Infection from minor wounds		7								7		1.2
75	Involving use of tools - no defect	1	74							1	74	2.8	13.1
95	Miscellaneous	1	94							1	94	2.8	16.6
124	Striking against or struck by objects	2	116		1		6			2	123	5.5	21.8
592	Total	12	532	1	6	22	24	1	3	36	565		
	Per Cent Killed	33.3		2.8		61.1		2.8				100.0	
	Per Cent Injured		94.2		1.1		4.2		0.5				100.0

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1945	12	399	1	4	10	7	1	7	24	417
1946	7	443	1	4	15	15	1	2	24	464
1947	12	532	1	6	22	24	1	3	36	565

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
5	Asphyxiation							3	4	3	4	60.0	2.2
4	Automobile accident		3				1		1		5		2.7
15	Burns--not from electric source		14						1		15		8.2
6	Defect or failure of equipment or machinery		6								6		3.3
	Drowning												
	Electric - Contact with charged wires or equipment												
7	Explosion		4					1	4	1	8	20.0	4.3
	Failure to use protective devices provided												
29	Falling - (Other than in water)	1	26				2			1	28	20.0	15.2
44	Handling materials		44								44		23.9
1	Infection from minor wounds		1								1		0.5
33	Involving use of tools - no defect		33								33		17.9
23	Miscellaneous		23		1						24		13.1
16	Striking against or struck by objects		16								16		8.7
183	TOTAL	1	170		1		3	4	10	5	184		
	Per Cent Killed	20.0						80.0				100.0	
	Per Cent Injured		92.4		0.5		1.6		5.5				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1945		126		2		3	7	54	7	185
1946	1	164		1		9	8	15	9	189
1947	1	170		1		3	4	10	5	184

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
2	Asphyxiation		2								2		2.9
2	Automobile accident		5								5		7.3
1	Burns - not from electric source		1								1		1.4
	Defect or failure of equipment or machines												
1	Drowning							2		2		100.0	
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
5	Falling (Other than in water)		5								5		7.3
11	Handling materials		11								11		16.0
1	Infection from minor wounds		1								1		1.4
15	Involving use of tools - no defect		15								15		21.7
16	Miscellaneous		16								16		23.2
13	Striking against or struck by objects		13								13		18.8
67	TOTAL		69					2		2	69		
	Per Cent Killed							100.0				100.0	
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1945		55						1		56
1946	1	65		2		5		1	1	73
1947		69					2		2	69

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
14	Automobile accident		8				10				18		14.3
	Burns - not from electric source												
3	Defect or failure of equipment or machines		3								3		2.4
	Drowning												
4	Electric - Contact with charged wires or equipment		3				1				4		3.2
	Explosion												
	Failure to use protective devices provided												
45	Falling - (Other than in water)		40		1		3		1		45		35.7
15	Handling materials		15								15		11.9
2	Infection from minor wounds		2								2		1.6
5	Involving use of tools - no defects		5								5		3.9
21	Miscellaneous		18				1		2		21		16.7
13	Striking against or struck by objects		8				4		1		13		10.3
122	TOTAL		102		1		19		4		126		
	Per Cent Killed												
	Per Cent Injured		80.9		0.8		15.1		3.2				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1945		86				16		3		105
1946		106				17		2		125
1947		102		1		19		4		126

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
1	Automobile accident						2				2		8.7
	Burns - not from electric source												
	Defect or failure of equipment or machines												
1	Drowning			2						2		100.0	
	Electric - Contact with charged wires or equipment												
1	Explosion		1								1		4.3
	Failure to use protective devices provided												
4	Falling - (Other than in water)		4								4		17.4
4	Handling materials		4								4		17.4
	Infection from minor wounds												
3	Involving use of tools - no defects		3								3		13.1
8	Miscellaneous		8								8		34.8
1	Striking against or struck by objects		1								1		4.3
23	TOTAL		21	2			2			2	23		
	Per Cent Killed			100.0								100.0	
	Per Cent Injured		91.3				8.7						100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1945	1	16	2			2	1		4	18
1946	1	13	2						3	13
1947		21	2			2			2	23

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipe Line and Steam Heating.

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1945 AND 1946

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1947 WITH 1946	YEAR			COMPARISON OF 1947 WITH 1946	YEAR			COMPARISON OF 1947 WITH 1946
	1945	1946	1947		1945	1946	1947		1945	1946	1947	
Steam Railroad	3833	3324	2946	-11.37%	341	255	264	+ 3.53%	3905	3387	3061	- 9.63%
Street Railway	4987	4282	4068	- 5.00%	109	73	66	- 9.59%	6007	5377	4959	- 7.77%
Motor Transportation	1903	1729	1948	+12.67%	70	62	62	-	3122	2610	2940	+12.64%
Electric	435	483	592	+22.57%	24	24	36	+ 50.00%	417	464	565	+21.77%
Gas	158	180	183	+ 1.67%	7	9	5	- 44.44%	185	189	184	- 2.65%
Water	56	74	67	- 7.46%	-	1	2	+100.00%	56	73	69	- 5.48%
Telephone & Telegraph	103	123	122	- .81%	-	-	-	-	105	125	126	+ .80%
Other Utilities	22	16	23	+43.75%	4	3	2	- 33.33%	18	13	23	+76.92%
TOTAL	11406*	10202*	9942*	- 2.55%	550*	426*	437*	+ 2.58%	13809*	12208*	11919*	- 2.38%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2,155	19.63
Protected by trainmen	1,466	13.36
Total Protected	3,621	32.99
Unprotected	7,356	67.01
TOTAL CROSSINGS	10,977	100.00

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	483	13.4
Watchmen	330	9.1
Flashing light signals	1,177*	32.5
Other visual signals	34**	0.9
Bells	131	3.6
Trainmen	1,466	40.5
TOTAL	3,621	100.0

* - Additional protection by short-arm gates at nine crossings.
** - Includes nine crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected	261	69	-	3	6	4	267	76	343	55.95
Protected by gates	16	4	-	5	-	-	16	9	25	4.08
Protected by watchmen	24	7	-	5	1	-	25	12	37	6.04
Protected by bells	14	1	-	-	-	1	14	2	16	2.61
Protected by visual signals	99	32	-	8	2	-	101	40	141	23.00
Protected by trainmen	36	13	-	2	-	-	36	15	51	8.32
Total Accidents at Protected Crossings	189	57	-	20	3	1	192	78	270	44.05
Total Accidents--Non Casualty	450		-		9		459			74.88
Total Accidents--Casualty		126		23		5		154		25.12
TOTAL ACCIDENTS	576		23		14				613	
Per Cent of Total Accidents	93.77		3.75		2.28				100.00	100.00

NC - Non-Casualty; C - Casualty

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected	18	84	2	1	-	10	20	95	115	51.80
Protected by gates	2	3	2	3	-	-	4	6	10	4.50
Protected by watchmen	3	12	3	2	-	-	6	14	20	9.01
Protected by bells	-	4	-	-	-	1	-	5	5	2.25
Protected by visual signals	9	40	5	3	-	-	14	43	57	25.68
Protected by trainmen	1	12	-	2	-	-	1	14	15	6.76
TOTAL	33	155	12	11	-	11	45	177	222	100.00
Killed and injured at protected crossings	15	71	10	10	-	1	25	82	107	48.20
Per Cent of Total Killed & Injured	84.69		10.36		4.95					100.00

K - Killed; I - Injured

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1945, 1946 and 1947

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Decrease	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Increase
*PROTECTED	1945	2,152	38		40.7
	1946	2,155	26	31.6	
	1947	2,155	24	7.7	
UNPROTECTED	1945	8,857	35		34.6
	1946	8,833	28	20.0	
	1947	8,822	21	25.0	
			INJURED		
*PROTECTED	1945	2,152	67	4.3	
	1946	2,155	59	11.9	
	1947	2,155	68		15.3
UNPROTECTED	1945	8,857	108	0.9	
	1946	8,833	145		34.3
	1947	8,822	109	24.8	

* - Not including those protected by trainmen

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1945	199	- 11.2%	21	+ 5.0%	63	- 24.1%
		1946	211	+ 6.0%	21	-	95	+ 50.8%
		1947	204	- 3.3%	19	- 9.5%	66	- 30.5%
	UNPROTECTED	1945	143	+ 20.2%	12	+100.0%	41	+ 7.9%
		1946	147	+ 2.8%	5	- 58.33%	39	- 4.9%
		1947	172	+ 17.0%	7	+ 40.0%	43	+ 10.2%
RURAL	PROTECTED	1945	72	- 13.3%	17	+112.5%	19	+ 11.8%
		1946	73	+ 1.4%	5	- 70.6%	17	- 10.5%
		1947	66	- 9.6%	6	+ 20.0%	16	- 5.9%
	UNPROTECTED	1945	165	+ 11.5%	23	+ 21.0%	52	+ 26.8%
		1946	161	- 2.4%	23	-	53	+ 1.9%
		1947	171	+ 6.2%	13	- 43.5%	52	- 1.9%

* - Cities or boroughs with population over 2,500.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1945, 1946 and 1947

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1945	270		1.5
	1946	276		2.2
	1947	289		4.7
		PERSONS KILLED		
	1945	35		34.6
	1946	30	14.3	
	1947	25	16.7	
		PERSONS INJURED		
	1945	80		21.2
	1946	83		3.7
	1947	67	19.3	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1945	309		0.3
	1946	316		2.3
	1947	324		2.5
		PERSONS KILLED		
	1945	38		40.7
	1946	24	36.8	
	1947	20	16.7	
		PERSONS INJURED		
	1945	95	15.9	
	1946	121		27.4
	1947	110	9.1	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	36	5.87	1	6
1 to 1:59 a.m.	20	3.26	-	4
2 to 2:59 a.m.	20	3.26	1	6
3 to 3:59 a.m.	11	1.79	1	7
4 to 4:59 a.m.	11	1.79	-	6
5 to 5:59 a.m.	16	2.61	-	3
6 to 6:59 a.m.	15	2.45	1	5
7 to 7:59 a.m.	22	3.59	5	2
8 to 8:59 a.m.	24	3.92	3	7
9 to 9:59 a.m.	25	4.08	2	3
10 to 10:59 a.m.	26	4.24	-	13
11 to 11:59 a.m.	22	3.59	1	4
Noon to 12:59 p.m.	23	3.75	-	2
1 to 1:59 p.m.	24	3.92	1	5
2 to 2:59 p.m.	25	4.08	1	5
3 to 3:59 p.m.	38	6.20	7	8
4 to 4:59 p.m.	27	4.40	2	9
5 to 5:59 p.m.	24	3.92	3	6
6 to 6:59 p.m.	22	3.59	4	12
7 to 7:59 p.m.	42	6.85	-	18
8 to 8:59 p.m.	28	4.57	1	7
9 to 9:59 p.m.	32	5.22	3	12
10 to 10:59 p.m.	38	6.20	4	17
11 to 11:59 p.m.	42	6.85	4	10
TOTAL	613	100.00	45	177

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	51	8.32	5	28
Monday	74	12.07	5	19
Tuesday	95	15.50	8	24
Wednesday	76	12.40	6	24
Thursday	79	12.89	7	22
Friday	122	19.90	6	30
Saturday	116	18.92	8	30
TOTAL	613	100.00	45	177

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	60	9.79	1	12
February	71	11.58	9	16
March	60	9.79	2	10
April	44	7.18	2	9
May	40	6.53	7	16
June	33	5.38	1	12
July	33	5.38	3	9
August	40	6.53	3	9
September	38	6.20	6	21
October	45	7.34	1	11
November	74	12.07	5	25
December	75	12.23	5	27
TOTAL	613	100.00	45	177

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED
1945, 1946 and 1947

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1945	558	73	168
	1946	549	54	168
	1947	570	42	157
Public Siding	1945	11	-	-
	1946	33	-	33
	1947	38	-	17
Private Siding	1945	10	-	7
	1946	10	-	3
	1947	5	3	3
Private Grade Crossing (Private Road)	1945	75	5	7
	1946	80	-	19
	1947	68	5	17

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1945, 1946 and 1947

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1945	132	59	156
	1946	125	36	161
	1947	126	33	155
Pedestrians	1945	25	13	12
	1946	23	15	10
	1947	23	12	11
Streetcars Autobuses Taxicabs	1945	3	-	7
	1946	5	1	30
	1947	3	-	9
Bicycles Motorcycles Wagons	1945	1	1	-
	1946	4	2	3
	1947	2	-	2

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES
1945, 1946 and 1947

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Unprotected	1945	229		
	1946	232		1.3
	1947	267		15.1
Protected	1945	189		
	1946	203	17.1	7.4
	1947	192	5.4	

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	1	1	5	0.51
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	-
Auto driven through lowered gates and struck by engine or train	-	2	8	0.82
Auto stalled on crossing and struck by engine or train	-	-	1	0.10
Auto struck by engine or train - gates not lowered	-	-	2	0.21
Auto struck by engine or train - gates out of order	1	-	4	0.41
Auto driven into side of moving train - gates out of order	-	-	2	0.21
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	23	104	298	30.63
Auto driven into side of engine or train moving over crossing	4	40	133	13.67
Auto driven into side of engine or train standing on crossing	-	13	37	3.80
Auto stalled on crossing and struck by engine or train	4	4	93	9.56
Total Accidents Involving Contact between Train and Auto	33	164	583	59.92
Auto colliding with crossing gates - No contact with train	-	1	363	37.31
Auto colliding with flashing light signal installations No contact with trains	-	4	27	2.77
Total Accidents Involving Automobiles at Grade Crossings	33	169	973	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	81	34	23	25	18.76
Passenger train - reverse movement	2	-	-	-	0.33
Freight train - normal movement	257	81	15	90	55.14
Freight train - reverse movement	5	5	-	10	1.63
Freight train - car ahead of engine	16	-	-	-	2.61
Switching movement - engine normal ahead of draft	16	4	-	5	3.26
Switching movement - engine reverse ahead of draft	2	3	4	3	0.82
Switching movement - engine pushing cars	9	2	-	2	1.79
Light engine - normal movement	57	19	3	35	12.40
Light engine - reverse movement	7	5	-	6	1.96
Motor track cars	4	-	-	-	0.65
Cars not attached	3	1	-	1	0.65
TOTAL	459	154	45	177	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1945, 1946 and 1947

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	490	1945	348*	0.710	2	8
	489	1946	376*	0.769	2	7
	483	1947	394*	0.815	2	4
Watchman	337	1945	47	0.139	-	3
	335	1946	54	0.161	6	15
	330	1947	65	0.197	4	24
Bells	136	1945	17	0.125	2	2
	135	1946	12	0.089	-	1
	131	1947	15	0.114	-	4
Visual Signals	1189	1945	155*	0.130	26	41
	1196	1946	150*	0.125	3	25
	1211	1947	158*	0.130	9	44
Trainmen	1444	1945	31	0.021	-	11
	1440	1946	48	0.033	-	27
	1466	1947	49	0.033	1	12

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1945	12	-	6
	1946	11	1	6
	1947	2	-	-
Gates out of order	1945	1	-	-
	1946	1	-	-
	1947	4	1	-
Persons passing under or around lowered gates	1945	11	5	6
	1946	8	6	2
	1947	5	2	3
Automobile driven through lowered gates striking or being struck by train.	1945	14	2	4
	1946	12	2	1
	1947	13	1	3
Unassigned	1945	6	-	-
	1946	6	-	3
	1947	1	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1945, 1946 and 1947

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1945	310		
	1946	342	6.6	10.3
	1947	363		6.1
Flashing light signals struck and damaged	1945	23		
	1946	20	13.0	9.6
	1947	27		35.0

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1938 - 1947

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1938	31	1	26
1939	32	-	24
1940	46	4	13
1941	42	2	20
1942	55	3	22
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	CASUALTY ACCIDENTS	NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	282	94	22	109	61.34
Cloudy	95	38	14	45	21.69
Fog	10	5	1	4	2.45
Rain	37	13	6	17	8.16
Snow	35	4	2	2	6.36
TOTAL	459	154	45	177	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	26	12	-	13	6.20
1 - 5	171	32	3	45	33.12
6 - 10	80	36	3	45	18.92
11 - 20	90	30	8	43	19.57
21 - 30	46	20	13	13	10.77
31 - 40	29	15	9	15	7.18
41 - 50	4	5	5	2	1.47
51 - 60	8	2	2	1	1.63
61 - 70	3	1	1	-	.65
Over 70	1	1	1	-	.33
Not Reported	1	-	-	-	.16
TOTAL	459	154	45	177	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	316	89	23	114	68.64
Wet	52	16	5	21	11.53
Muddy	2	-	-	-	.34
Snowy	31	4	1	3	5.93
Icy	37	10	1	14	7.97
Not Reported	21	12	3	14	5.59
TOTAL	459	131	33	166	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	29	1	15	4.91
21 - 30	99	9	32	16.78
21 - 40	75	9	39	12.71
41 - 50	46	4	29	7.80
51 - 60	29	4	9	4.91
Over 60	20	6	10	3.39
Not Reported	292	-	32	49.50
TOTAL	590	33	166	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	546	28	154	92.54
Female	29	5	12	4.92
Not Reported	15	-	-	2.54
TOTAL	590	33	166	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	442	20	124	74.91
Not Familiar	25	2	11	4.24
Not Reported	123	11	31	20.85
TOTAL	590	33	166	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	1	-	-	0.16
Allegheny	78	8	27	12.73
Armstrong	4	-	-	0.65
Beaver	5	1	-	0.82
Bedford	-	-	-	-
Berks	10	1	3	1.63
Blair	6	-	-	0.98
Bradford	4	-	-	0.65
Bucks	4	-	-	0.65
Butler	12	-	4	1.96
Cambria	12	-	1	1.96
Cameron	3	-	2	0.49
Carbon	-	-	-	-
Centre	11	-	-	1.79
Chester	4	1	-	0.65
Clarion	2	-	-	0.33
Clearfield	22	1	9	3.59
Clinton	6	1	1	0.98
Columbia	5	-	2	0.82
Crawford	11	-	4	1.79
Cumberland	4	-	-	0.65
Dauphin	7	2	-	1.14
Delaware	10	-	5	1.63
Elk	7	1	2	1.14
Erie	22	6	11	3.59
Fayette	37	2	5	6.04
Forest	-	-	-	-
Franklin	5	-	-	0.82
Fulton	-	-	-	-
Green	-	-	-	-
Huntingdon	2	1	1	0.33
Indiana	14	2	6	2.28
Jefferson	6	1	1	0.98
Juniata	-	-	-	-

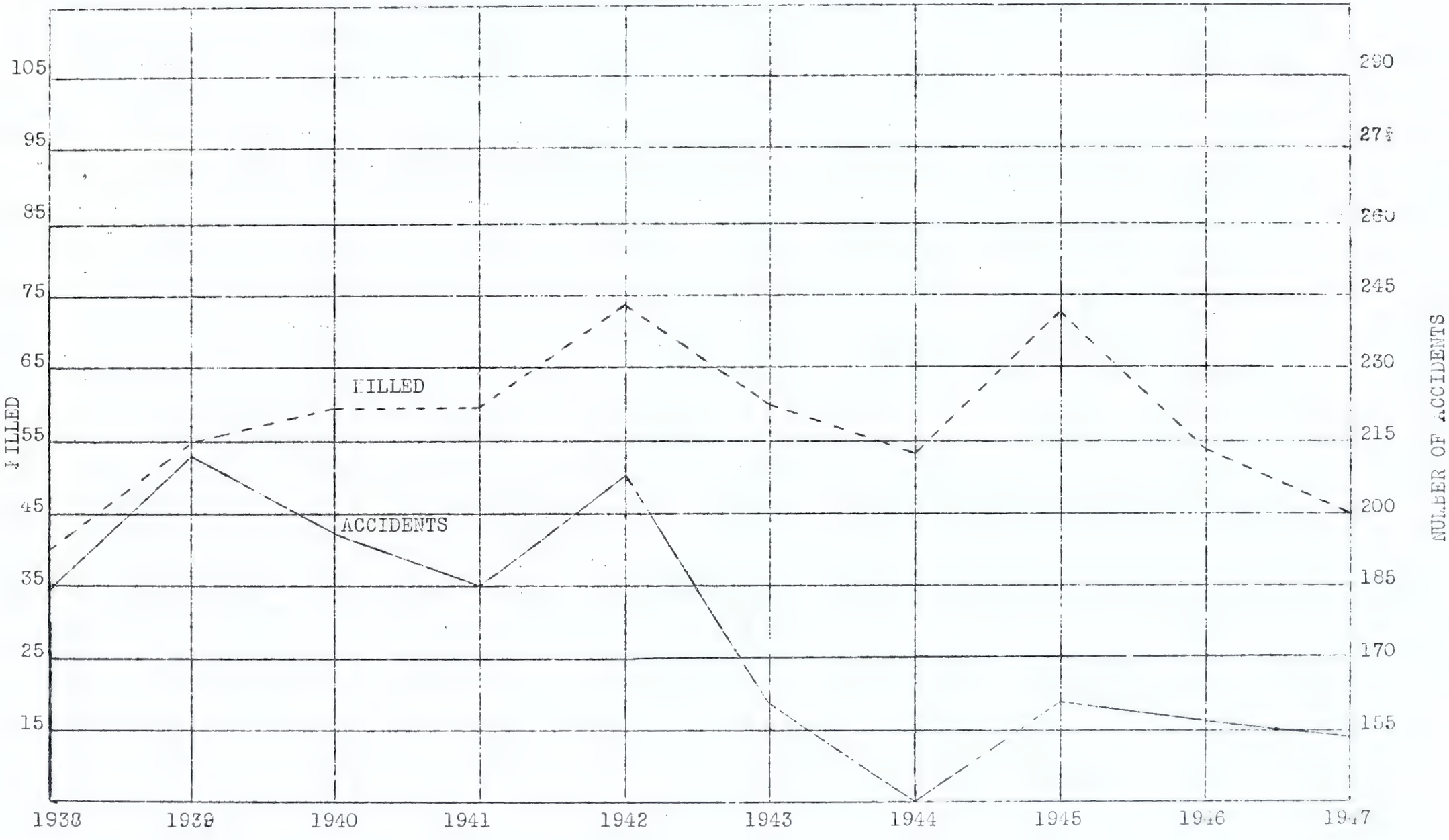
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	10	-	5	1.63
Lancaster	4	-	1	0.65
Lawrence	4	-	2	0.65
Lebanon	3	-	2	0.49
Lehigh	11	2	3	1.79
Luzerne	26	2	10	4.24
Lycoming	11	2	5	1.79
McKean	17	-	4	2.77
Mercer	19	1	4	3.10
Mifflin	2	-	-	0.33
Monroe	-	-	-	-
Montgomery	11	-	7	1.79
Montour	3	-	-	0.49
Northampton	3	-	-	0.49
Northumberland	20	-	5	3.26
Perry	1	-	-	0.16
Philadelphia	17	1	8	2.77
Pike	2	3	-	0.33
Potter	2	-	4	0.33
Schuylkill	19	-	10	3.10
Snyder	-	-	-	-
Somerset	9	-	9	1.47
Sullivan	-	-	-	-
Susquehanna	-	-	-	-
Tioga	5	-	-	0.82
Union	4	-	-	0.65
Venango	-	-	-	-
Warren	6	1	3	0.98
Washington	21	2	2	3.43
Wayne	5	-	-	0.82
Westmoreland	32	2	4	5.22
Wyoming	-	-	-	-
York	32	1	5	5.22
TOTAL	613	45	177	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1938 - 1947

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1938	11,667	459	40	277	2,035,667	2.25
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,362	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	176	2,060,546	2.81
1946	11,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA 1938 - 1947



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
329	Collision with other vehicle		35	1	360				1	2	183			3	579	37.50	72.65
9	Collision with fixed object	1	5		10									1	15	12.50	1.88
38	Struck by taxicab				1			3	35				5	3	41	37.50	5.14
148	Running or walking into side of taxicab							1	150					1	150	12.50	18.82
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
1	Caught by vehicle doors								1						1		.13
2	Jumping on or off vehicle in motion				2										2		.25
5	Sudden stop of vehicle		1		4				2						7		.88
1	Defect or failure of equipment								2						2		.25
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
533	TOTAL	1	41	1	377			4	191	2	183		5	8	797		
	Per Cent Killed	12.5		12.5				50.0		25.0						100.00	
	Per Cent Injured		5.14		41.30				23.97		22.96		.63				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
422	Collision with other vehicle		26		561				4	18	347			18	938	60.0	48.98
29	Collision with fixed object		6	1	104						1		1	1	112	3.3	5.85
128	Struck by autobus							11	101				21	11	122	6.7	6.37
25	Running or walking into side of autobus								25						25		1.31
313	Boarding or alighting (Standing vehicle)		1		285				26				2		314		16.40
104	Falling within vehicle				107										107		5.59
56	Caught by vehicle doors				57										57		2.98
2	Jumping on or off vehicle in motion				2										2		.10
99	Sudden stop of vehicle		2		115				1						118		6.16
24	Defect or failure of equipment		3		63				1						67		3.50
4	Vehicle skidded				7										7		.37
2	Highway defect				2										2		.10
1	Apparent reckless operation of vehicle		1												1		.05
41	Miscellaneous		17		23				1				2		43		2.24
1250	TOTAL		56	1	1326			11	159	18	348		26	30	1915		
	Per Cent Killed			3.3				36.7		60.0						100.00	
	Per Cent Injured		2.9		69.2				8.3		18.2		1.4				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
3	Collision with other vehicle				9										9		90.0
1	Collision with fixed object				1										1		10.0
2	Struck by autobus							1				1		2		100.0	
	Running or walking into side of autobus																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
6	TOTAL				10			1				1		2	10		
	Per Cent Killed							50.0				50.0				100.0	
	Per Cent Injured			100.0													100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
93	Collision with other vehicles		20		5				1	16	115		4	16	145	80.00	85.30
11	Collision with fixed object	2	7		1				1		1			2	10	10.00	5.88
10	Struck by truck	1						1	7				1	2	8	10.00	4.71
3	Running or walking into side of truck								3						3		1.76
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
4	Defect or failure of equipment		2								1		1		4		2.35
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
121	TOTAL	3	29		6			1	12	16	117		6	20	170		
	Per Cent Killed	15.0						5.0		80.0						100.00	
	Per Cent Injured		17.1		3.5				7.1		68.8		3.5				100.00

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
27	Collision with other vehicle		12		5					1	21			1	38	50.00	79.17
	Collision with fixed object																
8	Struck by taxicab, autobus or truck							1	7					1	7	50.00	14.58
2	Running or walking into side of taxicab, autobus or truck								2						2		4.17
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
1	Apparent reckless operation of vehicle		1												1		2.08
	Miscellaneous																
38	TOTAL		13		5			1	9	1	21			2	48		
	Per Cent Killed							50.0		50.0						100.00	
	Per Cent Injured		27.1		10.4				18.8		43.7						100.00

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1945	1	53		471			3	155	1	123		7	5	809
1946	1	46	2	469		1	3	157	1	215		3	7	891
1947	1	41	1	377			4	191	2	183		5	8	797

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1945	1	69	4	1326		3	18	163	10	425	3	43	35	2029
1946		51	3	1003			18	124	10	340	1	14	32	1532
1947		56	1	1326			11	159	18	348		26	30	1915

TABLE NO. VIII- COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1945				10					2				2	11
1946		1		35						1		1		38
1947				10			1				1		2	10

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1945	5	36		11		1	3	12	15	157	1	4	24	221
1946	4	29	1	10			4	16	11	61	1	4	21	120
1947	3	29		6			1	12	16	117		6	20	170

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1945	1	14					2	5	1	32		1	4	52
1946		7		8				4	2	9		1	2	29
1947		13		5			1	9	1	21			2	48

K - Killed
I - Injured

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

1948

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

Harrisburg, Pennsylvania
June 13, 1949

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors McShea and Johnson

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
June 13, 1949

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1948.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1948 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	63	Bridge (Toll)	11
Street Railways	11	Canal	2
Ferries	17	Electric	45
Motorboats	10	Gas (Artificial)	41
Steamboats	2	Gas (Natural)	80
Express	1	Pipe Lines	5
Bus - Scheduled Service	482	Sewerage	16
Bus - Group and Party	263	Steam Heat	26
Taxi - Call and Demand	893	Telegraph	2
Truck - Common Carrier	8544	Telephone	183
Airways	88	Water	490
Incline Plane	3	Wharfage	3
		Stock Yards	3
Total Transportation Utilities			10,377
Total Service Utilities			907
Total			11,284

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 824 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $250 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages, summarized on page 15, will show that in 1948 there was a substantial decrease in casualty accidents involving all transportation utilities and accidents involving service utilities also decreased. The summary which includes all utilities indicates that the total number of accidents decreased more than 6% during the year and that the number of fatalities was increased more than 7% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	2577	220	2584	27.68	46.71	23.34
Street Railway	3837	71	4574	41.20	15.08	41.32
Motor Transportation	2067	69	3105	22.20	14.65	28.05
Electric	498	78	472	5.35	16.56	4.26
Gas	206	31	211	2.21	6.58	1.91
Water	46	-	46	.49	-	0.41
Telephone & Telegraph	70	1	69	.75	0.21	0.62
Other Utilities	11	1	10	.12	0.21	0.09
TOTAL	9274*	471	11014*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	56	1935	3	228	9	151	15	467	4	156	-	45	1	62	-	9	88	3053	18.68	27.58
Trespasser	93	63	6	19	-	1	1	1	-	-	-	-	-	-	1	-	101	84	21.44	.75
Other	5	126	1	40	5	26	62	2	5	31	-	1	-	4	-	1	78	231	16.56	2.09
Passenger, Patron or Consumer	1	263	10	2821	5	1779	-	2	22	24	-	-	-	3	-	-	38	4892	8.07	44.19
Pedestrian	16	7	35	427	21	414											72	848	15.29	7.66
Occupant Other Vehicle	49	190	16	1039	29	734											94	1963	19.96	17.73
TOTAL	220	2584	71	4574	69	3105	78	472	31	211	-	46	1	69	1	10	471	11014*		
Per Cent Killed	46.71		15.08		14.65		16.56		6.58		-		0.21		0.21				100.00	
Per Cent Injured	23.34		41.32		28.05		4.26		1.91		.41		.62		.09				100.00	

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYERS		PASSENGERS		TRESPASSERS		OTHERS *		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
176	Grade Crossings(for details-see appendix)	-	4	-	-	-	-	65	197	65	201	29.55	7.78
29	Collisions	6	35	-	22	-	-	-	9	6	66	2.73	2.55
15	Derailments	8	29	-	30	-	-	-	-	8	59	3.64	2.28
94	At station or loading platform	-	9	-	31	-	-	-	54	-	94		3.64
14	Defect or failure of roadway or equipment	-	10	-	3	-	-	-	1	-	14		.54
78	Operating switches	-	78	-	-	-	-	-	-	-	78		3.02
61	Struck overhead or side obstruction	5	54	-	-	-	-	1	1	6	55	2.73	2.13
110	Repairing track or roadbed	-	110	-	-	-	-	-	-	-	110		4.26
103	Struck by flying missile, glass, etc.	1	95	-	5	-	-	-	2	1	102	.45	3.95
93	Coupling or uncoupling	-	93	-	-	-	-	-	-	-	93		3.60
75	Falling on locomotive or car	-	60	-	11	-	-	-	4	-	75		2.90
267	Falling from locomotive or car	8	238	-	9	2	7	-	7	10	261	4.54	10.10
374	Getting on or off locomotive or car	-	258	1	108	-	3	-	4	1	373	.45	14.44
211	Struck by locomotive or car	27	50	-	-	86	42	3	4	116	96	52.73	3.71
113	Operating hand brakes	-	113	-	-	-	-	-	-	-	113		4.37
228	Sudden starting or stopping of trains	-	211	-	28	-	1	-	13	-	253		9.79
3	Coming in contact with catenary wire	1	-	-	-	2	-	-	-	3	-	1.36	-
100	On or about locomotive	-	102	-	-	-	-	-	-	-	102		3.95
433	Miscellaneous	-	386	-	16	3	10	1	27	4	439	1.82	16.99
2577	TOTAL	56	1935	1	263	93	63	70	323	220	2584		
	Per Cent Killed	25.46		0.45		42.27		31.82				100.00	
	Per Cent Injured		74.88		10.18		2.44		12.50				100.00

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $250 OR MORE
(PRIOR YEARS $150 MINIMUM)

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS		434	25.77	
MAIN TRACK	50			- 21.87
YARD TRACK	384			- 27.95
DERAILMENTS:		906	53.80	
MAIN TRACK	436			- 13.66
YARD TRACK	470			- 44.64
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		300	17.82	- 39.88
MISCELLANEOUS		44	2.61	- 4.35
TOTAL		1684	100.00	- 32.53

Note: 645 of the 906 Derailments (71.1%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $250 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1946	2307	- 4.00	$2,025,085	- 12.98
1947	2496	+ 8.19	$2,512,437	+ 24.06
1948	1684	-32.53	$3,020,998	+ 20.24

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE *
	1946	1947	1948		1946	1947	1948	
EMPLOYEES	63	75	56	- 25.33	2616	2242	1935	- 13.69
PASSENGERS	12	21	1	- 95.24	369	434	263	- 39.40
TRESPASSERS	122	106	93	- 12.26	53	65	63	- 3.08
OTHERS **	58	62	70	+ 19.35	349	320	323	+ 0.94
TOTAL	255	264	220	- 16.66	3387	3061	2584	- 15.58

* Comparison of 1948 with 1947

** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	6	59	10.71	3.05
Road Firemen	6	96	10.71	4.96
Road Conductors	1	137	1.79	7.08
Road Brakemen	10	296	17.85	15.30
Road Flagmen	-	44		2.27
Road Baggagemen	-	16		0.83
Yard Enginemen and Firemen	1	102	1.79	5.27
Yard Brakemen and Conductors	14	788	25.00	40.72
Yard Switch Tenders	-	12		0.62
Crossing Watchmen	1	4	1.79	0.21
Track Walkers	-	-		
Sectionmen and Work Train Laborers	9	142	16.07	7.34
Signalmen and Signal Maintainers	-	9		.47
Station Baggagemen	-	7		.36
Car Cleaners	-	3		.15
Car Inspectors	5	11	8.93	.57
Car Repairmen	-	11		.57
Carpenters	-	8		.41
Dining Car Employees	-	52		2.69
Miscellaneous	2	87	3.57	4.50
Employees Not on Duty	1	51	1.79	2.63
TOTAL	56	1935	100.00	100.00

TABLE 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21	-	-		-	-		-	-		-	1	.32
21 - 30	-	3	4.62	1	37	37.25	-	6	4.35	-	79	25.82
31 - 40	-	2	3.07	4	36	39.22	-	14	10.15	2	68	22.88
41 - 50	2	17	29.23	1	17	17.65	-	18	13.04	3	57	19.61
51 - 60	3	22	38.47	-	5	4.90	1	64	47.10	2	62	20.92
61	-	3	4.62	-	-		-	6	4.35	-	8	2.61
62	-	4	6.15	-	1	.98	-	7	5.07	1	4	1.63
63	-	2	3.07	-	-		-	8	5.80	-	6	1.96
64	-	3	4.62	-	-		-	5	3.62	1	2	.98
65	1	3	6.15	-	-		-	5	3.62	1	1	.65
Over 65	-	-		-	-		-	4	2.90	-	4	1.31
Not Reported	-	-		-	-		-	-		-	4	1.31
TOTAL	6	59	100.00	6	96	100.00	1	137	100.00	10	296	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21	-	-		-	2	1.94	-	5	.62	-	8	.51
21 - 30	-	6	13.64	-	23	22.33	4	277	35.04	5	431	27.95
31 - 40	-	10	22.73	-	32	31.07	4	202	25.68	10	364	23.98
41 - 50	-	8	18.19	-	15	14.57	1	129	16.21	7	261	17.18
51 - 60	-	9	20.46	-	22	21.36	4	113	14.59	10	297	19.68
61	-	1	2.27	-	-		-	8	1.00	-	26	1.67
62	-	1	2.27	-	2	1.94	1	11	1.50	2	30	2.05
63	-	2	4.54	-	-		-	6	.75	-	24	1.54
64	-	5	11.36	-	3	2.91	-	9	1.12	1	27	1.79
65	-	1	2.27	-	1	.97	-	6	.75	2	17	1.22
Over 65	-	1	2.27	1	2	2.91	-	6	.75	1	17	1.15
Not Reported	-	-		-	-		-	16	1.99	-	20	1.28
TOTAL	-	44	100.00	1	102	100.00	14	788	100.00	38	1522	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

No. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
80	Collision of cars	-	11	-	197	-	-	-	-	-	-	-	-	-	208		4.55
1065	Collision of car and vehicle	1	30	1	502	-	-	16	1033	1	11	1	35	20	1611	28.16	35.22
448	Struck by car	-	3	7	7	5	2	-	-	34	399	-	3	46	414	64.79	9.05
26	Derailment of car	-	2	-	56	-	-	-	1	-	-	-	-	-	59		1.29
5	Contact with overhead or side obst.	2	-	-	3	-	-	-	-	-	-	-	-	2	3	2.82	.07
2	Contact with trolley or feed wire or third rail	-	-	-	-	1	1	-	1	-	-	-	-	1	2	1.41	.04
133	Sudden stop	-	1	-	148	-	-	-	-	-	-	-	-	-	149		3.26
100	Defect or failure of roadway or eqp.	-	12	-	105	-	-	-	3	-	-	-	-	-	120		2.62
278	Caught by doors	-	-	-	280	-	-	-	-	-	-	-	-	-	280		6.12
186	Boarding standing car	-	3	2	182	-	-	-	-	-	-	-	-	2	185	2.82	4.04
477	Alighting from car	-	15	-	465	-	-	-	-	-	-	-	-	-	480		10.50
569	Falling within car	-	4	-	567	-	-	-	-	-	-	-	-	-	571		12.48
26	Jumping on or off car while in motion	-	-	-	14	-	13	-	-	-	-	-	-	-	27		.59
193	At elevated or subway platforms	-	1	-	188	-	-	-	-	-	5	-	-	-	194		4.24
54	Repair work on right of way	-	54	-	-	-	-	-	-	-	-	-	-	-	54		1.18
33	Struck by flying missile, glass, etc.	-	7	-	24	-	-	-	-	-	4	-	1	-	36		.79
162	Miscellaneous	-	85	-	83	-	3		1	-	8	-	1		181		3.96
3837	TOTAL	3	228	10	2821	6	19	16	1039	35	427	1	40	71	4574		
	Per Cent Killed	4.22		14.08		8.45		22.54		49.30		1.41				100.0	
	Per Cent Injured		4.98		6167		0.42		22.72		9.34		.87				100.0

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1948 WITH 1947	YEAR			COMPARISON OF 1948 WITH 1947
	1946	1947	1948		1946	1947	1948	
Employees	2	3	3	-	283	272	228	- 16.17%
Passengers	3	8	10	+ 25.00%	3154	3010	2821	- 6.28%
Trespassers	4	9	6	- 33.33%	15	14	19	+ 35.71%
Occupants of other vehicles	14	14	16	+ 14.28%	1290	1103	1039	- 5.80%
Pedestrians	46	31	35	+ 12.90%	611	497	427	- 14.08%
Others	4	1	1	-	24	63	40	- 36.51%
TOTAL	73	66	71	+ 7.57%	5377	4959	4574	- 7.76%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables I - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
975	Collision with other vehicle	5	93	4	1101	-	-	1	8	29	733	-	2	39	1937	56.5	62.4
47	Collision with fixed object	3	14	-	60	-	-	-	8	-	1	2	-	5	83	7.3	2.7
216	Struck by auto-bus, taxicab or truck	1	-	-	5	-	-	20	183	-	-	3	24	24	212	34.8	6.8
189	Running or walking into side of auto-bus, taxicab or truck	-	-	-	12	-	-	-	179	-	-	-	-	-	191		6.2
282	Boarding or alighting (standing vehicle)	-	4	1	250	-	-	-	29	-	-	-	-	1	283	1.4	9.1
102	Falling within vehicle	-	-	-	102	-	-	-	-	-	-	-	-	-	102		3.3
63	Caught by vehicle doors	-	-	-	63	-	-	-	-	-	-	-	-	-	63		2.0
3	Jumping on or off vehicle in motion	-	1	-	1	-	1	-	-	-	-	-	-	-	3		0.1
118	Sudden stop of vehicle	-	5	-	125	-	-	-	2	-	-	-	-	-	132		4.3
22	Defect or failure of equipment	-	7	-	34	-	-	-	1	-	-	-	-	-	42		1.3
3	Vehicle skidded	-	2	-	1	-	-	-	-	-	-	-	-	-	3		0.1
5	Highway defect	-	3	-	2	-	-	-	-	-	-	-	-	-	5		0.2
4	Apparent reckless operation of vehicle	-	1	-	3	-	-	-	-	-	-	-	-	-	4		0.1
38	Miscellaneous	-	21	-	20	-	-	-	4	-	-	-	-	-	45		1.4
2067	TOTAL	9	151	5	1779	-	1	21	414	29	734	5	26	69	3105		
	Per Cent Killed	13.0		7.3		-		30.4		42.0		7.3				100.0	
	Per Cent Injured		4.9		57.3		0.1		13.3		23.6		0.8				100.0

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	893	662	11	1003	865	$199,752.85
Schedule Route (Bus Service)	482	1268	34	1906	514	330,856.82
Group and Party (Bus Service)	263	14	-	23	5	8,943.00
Freight & Merchandise (Truck)	8544	91	15	142	157	175,057.32
Contract Carrier (Persons and Property)	824	32	9	31	42	26,916.45
TOTAL	11,006	2067	69	3105	1583	$741,526.44

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

		CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
YEAR	NUMBER OF REGULATED OPERATORS	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1946	9,676	2676	- 6.82%	62	- 11.43%	2610	- 16.40%	$495,891.54	- 2.98%
1947	10,758	3129	+ 16.93%	62	-	2940	+ 12.64%	637,596.59	+ 28.58%
1948	11,006	3650	+ 16.65%	69	+ 11.29%	3105	+ 5.61%	741,526.44	+ 16.30%

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
32	Asphyxiation	1	4			4	7	21	4	26	15	23.5	1.9
24	Automobile accident		22				3				25		3.1
27	Burns - not from electric source		20				8		6		34		4.2
20	Defect or failure of equipment or machines		19			1				1	19	0.9	2.4
5	Drowning	1		2		2				5		4.5	
44	Electric - Contact with charged wires or equipment	7	23		1	15	2			22	26	19.8	3.2
21	Explosion	2	6			1	16	1	16	4	38	3.6	4.7
1	Failure to use protective devices provided		1								1		.1
180	Falling - (Other than in water)	4	171			2	2		2	6	175	5.4	21.6
139	Handling materials		139								139		17.2
26	Infection from minor wounds	1	26							1	26	0.9	3.2
143	Involving use of tools - no defect	2	141							2	141	1.8	17.5
147	Miscellaneous	2	145			42	1		1	44	147	39.6	18.2
22	Striking against or struck by objects		22								22		2.7
831	TOTAL	20	739	2	1	67	39	22	29	111	808		
	Per Cent Killed	18.02		1.80		60.36		19.82				100.0	
	Per Cent Injured		91.46		0.12		4.83		3.59				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1946	1947	1948	COMPARISON OF 1948 WITH 1947	1946	1947	1948	COMPARISON OF 1948 WITH 1947
EMPLOYEES	10	13	20	+ 53.85%	791	894	739	- 17.34%
TRESPASSERS	3	2	2	-	7	8	1	- 87.50%
OTHERS	15	22	67	+ 204.55%	46	48	39	- 18.75%
PATRONS OR CONSUMERS	9	7	22	+ 214.28%	20	17	29	+ 70.59%
TOTAL	37	44	111	+ 152.27%	864	967	808	- 16.44%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
4	Asphyxiation	1	1						2	1	3	1.3	0.6
13	Automobile accident		14								14		3.0
12	Burns - not from electric source		13								13		2.8
13	Defect or failure of equipment or machinery		12			1				1	12	1.3	2.5
4	Drowning	1		1		2				4		5.1	
44	Electric - Contact with charged wires or equipment	7	23		1	15	2			22	26	28.2	5.5
2	Explosion		3								3		0.6
	Failure to use protective devices provided												
104	Falling - (Other than in water)	3	100			2				5	100	6.4	21.2
77	Handling materials		77								77		16.3
6	Infection from minor wounds		6								6		1.3
99	Involving use of tools - no defect	1	98							1	98	1.3	20.8
106	Miscellaneous	2	106			42				44	106	56.4	22.4
14	Striking against or struck by objects		14								14		3.0
498	TOTAL	15	467	1	1	62	2		2	78	472		
	Per Cent Killed	19.2		1.3		795						100.0	
	Per Cent Injured		99.0		0.2		0.4		0.4				100.0

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1946	7	443	1	4	15	15	1	2	24	464
1947	12	532	1	6	22	24	1	3	36	565
1948	15	467	1	1	62	2	-	2	78	472

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
26	Asphyxiation		1			4	7	21	2	25	10	80.7	4.7
4	Automobile accident		4								4		1.9
15	Burns--not from electric source		7				8		6		21		10.0
5	Defect or failure of equipment or machinery		5								5		2.4
	Drowning										-		
	Electric - Contact with charged wires or equipment									-	-		
19	Explosion	2	3			1	16	1	16	4	35	12.9	16.6
	Failure to use protective devices provided										-		
42	Falling - (Other than in water)		42								42		19.9
35	Handling materials		35								35		16.6
7	Infection from minor wounds	1	7							1	7	3.2	3.3
26	Involving use of tools - no defect	1	25							1	25	3.2	11.8
23	Miscellaneous		23								23		10.9
4	Striking against or struck by objects		4								4		1.9
206	TOTAL	4	156			5	31	22	24	31	211		
	Per Cent Killed	12.9				16.1		71.0				100.0	
	Per Cent Injured		73.9				14.7		11.4				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1946	1	164		1		9	8	15	9	189
1947	1	170		1		3	4	10	5	184
1948	4	156	-	-	5	31	22	24	31	211

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation		1								1		2.2
	Automobile accident												
	Burns - not from electric source												
	Defect or failure of equipment or machines												
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
1	Failure to use protective devices provided		1								1		2.2
9	Falling (Other than in water)		8				1				9		19.6
15	Handling materials		15								15		32.6
3	Infection from minor wounds		3								3		6.5
12	Involving use of tools - no defect		12								12		26.1
3	Miscellaneous		3								3		6.5
2	Striking against or struck by objects		2								2		4.3
46	TOTAL		45				1				46		
	Per Cent Killed												
	Per Cent Injured		97.8				2.2						100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1946	1	65	-	2	-	5	-	1	1	73
1947	-	69	-	-	-	-	2	-	2	69
1948	-	45	-	-	-	1	-	-	-	46

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation		1								1		1.4
6	Automobile accident		4	-	-		2	-	-		6		8.7
	Burns - not from electric source									-	-		
2	Defect or failure of equipment or machines		2								2		2.9
	Drowning									-	-		
	Electric - Contact with charged wires or equipment									-	-		
-	Explosion									-	-		
	Failure to use protective devices provided									-	-		
23	Falling - (Other than in water)	1	19				1	-	2	1	22	100.0	31.9
10	Handling materials		10								10		14.5
8	Infection from minor wounds		8								8		11.6
5	Involving use of tools - no defects		5								5		7.2
13	Miscellaneous		11				1		1		13		18.9
2	Striking against or struck by objects		2								2		2.9
70	TOTAL	1	62				4		3	1	69		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		89.9				5.8		4.3				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1946		106				17		2		125
1947		102		1		19		4		126
1948	1	62	-	-		4		3	1	69

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
1	Automobile accident						1				1		10.0
	Burns - not from electric source												
	Defect or failure of equipment or machines												
1	Drowning			1						1		100.0	
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
2	Falling - (Other than in water)		2								2		20.0
2	Handling materials		2								2		20.0
2	Infection from minor wounds		2								2		20.0
1	Involving use of tools - no defects		1								1		10.0
2	Miscellaneous		2								2		20.0
	Striking against or struck by objects												
11	TOTAL		9	1			1			1	10		
	Per Cent Killed			100.0								100.0	
	Per Cent Injured		90.0				10.0						100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1946	1	13	2						3	13
1947		21	2			2			2	23
1948	-	9	1			1			1	10

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1946 AND 1947

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1948 WITH 1947	YEAR			COMPARISON OF 1948 WITH 1947	YEAR			COMPARISON OF 1948 WITH 1947
	1946	1947	1948		1946	1947	1948		1946	1947	1948	
Steam Railroad	3324	2946	2577	- 12.52%	255	264	220	- 16.66%	3387	3061	2584	- 15.58%
Street Railway	4282	4068	3837	- 5.68%	73	66	71	+ 7.57%	5377	4959	4574	- 7.76%
Motor Transportation	1729	1948	2067	+ 6.11%	62	62	69	+ 11.29%	2610	2940	3105	+ 5.61%
Electric	483	592	498	- 15.88%	24	36	78	+ 116.67%	464	565	472	- 16.46%
Gas	180	183	206	+ 12.57%	9	5	31	+ 520.00%	189	184	211	+ 14.67%
Water	74	67	46	- 31.34%	1	2	-	- 100.00%	73	69	46	- 33.33%
Telephone & Telegraph	123	122	70	- 42.62%	-	-	1	-	125	126	69	- 45.24%
Other Utilities	16	23	11	- 52.17%	3	2	1	- 50.00%	13	23	10	- 56.52%
TOTAL	10202*	9942*	9274*	- 6.72%	426*	437	471	+ 7.78%	12208*	11918*	11014*	- 7.59%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2172	19.90
Protected by trainmen	1465	13.43
Total Protected	3637	33.33
Unprotected (see note)	7276	66.67
TOTAL CROSSINGS	10,913	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	472	13.0
Watchmen	319	8.8
Flashing light signals	1220*	33.5
Other visual signals	34**	0.9
Bells	127	3.5
Trainmen	1465	40.3
TOTAL	3637	100.00

* - Additional protection by short-arm gates at 27 crossings.
** - Includes nine crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected *	277	65		4	4	2	281	71	352	54.57
Protected by gates	25	8		9	1		26	17	43	6.66
Protected by watchmen	25	12			1	3	26	15	41	6.36
Protected by bells	4	4					4	4	8	1.24
Protected by visual signals	113	35		10	1	1	114	46	160	24.81
Protected by trainmen	28	9			3	1	31	10	41	6.36
Total Accidents at Protected Crossings	195	68		19	6	5	201	92	293	45.43
Total Accidents--Non Casualty	472				10		482			74.73
Total Accidents--Casualty		133		23		7		163		25.27
TOTAL ACCIDENTS	605		23		17				645	
Per Cent of Total Accidents	93.80		3.57		2.63					100.00

NC - Non-Casualty; C - Casualty
* See "Note" Page 16

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected *	19	76	4	-	-	9	23	85	108	43.03
Protected by gates	-	14	6	3	-	-	6	17	23	9.16
Protected by watchmen	7	12	-	-	1	2	8	14	22	8.77
Protected by bells	1	4	-	-	-	-	1	4	5	1.99
Protected by visual signals	13	46	6	4	-	1	19	51	70	27.89
Protected by trainmen	3	17	-	-	-	3	3	20	23	9.16
TOTAL	43	169	16	7	1	15	60	191	251	100.00
Killed and Injured at protected crossings	24	93	12	7	1	6	37	106	143	56.97
Per Cent of Total Killed & Injured	84.46		9.16		6.38					100.00

K - Killed; I - Injured
* See "Note" Page 16.

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1946, 1947 and 1948

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1946	2155	26	31.6	
	1947	2155	24	7.7	
	1948	2172	34		41.7
**UNPROTECTED	1946	8833	28	20.0	
	1947	8822	21	25.0	
	1948	8741	26		23.8
			INJURED		
*PROTECTED	1946	2155	59	11.9	
	1947	2155	68		15.3
	1948	2172	86		26.5
**UNPROTECTED	1946	8833	145		34.3
	1947	8822	109	24.8	
	1948	8741	105	3.7	

* - Not including those protected by trainmen

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1946	211	+ 6.0%	21	-	95	+ 50.8%
		1947	204	- 3.3%	19	- 9.5%	66	-30.5%
		1948	207	+ 1.5%	24	+ 26.3%	79	+ 19.7%
	UNPROTECTED**	1946	147	+ 2.8%	5	- 58.3%	39	- 4.9%
		1947	172	+ 17.0%	7	+ 40.0%	43	+ 10.2%
		1948	166	- 3.5%	9	+ 28.6%	37	-13.9%
RURAL	PROTECTED	1946	73	+ 1.4%	5	-70.6%	17	-10.5%
		1947	66	- 9.6%	6	+ 20.0%	16	- 5.9%
		1948	86	+ 30.3%	13	+ 116.7%	27	+ 68.7%
	UNPROTECTED**	1946	161	- 2.4%	23	-	53	+ 1.9%
		1947	171	+ 6.2%	13	-43.5%	52	- 1.9%
		1948	186	+ 8.8%	14	+ 7.7%	48	- 7.7%

* - Cities or boroughs with population over 2,500.

** - See "Note" page 16.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1946, 1947 and 1948

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1946	276		2.2
	1947	289		4.7
	1948	319		10.4
		PERSONS KILLED		
	1946	30	14.3	
	1947	25	16.7	
	1948	31		24.0
		PERSONS INJURED		
	1946	83		3.7
	1947	67	19.3	
	1948	75		11.9
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1946	316		2.3
	1947	324		2.5
	1948	326		0.6
		PERSONS KILLED		
	1946	24	36.8	
	1947	20	16.7	
	1948	29		45.0
		PERSONS INJURED		
	1946	121		27.4
	1947	110	9.1	
	1948	116		5.4

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	39	6.05	2	19
1 to 1:59 a.m.	28	4.34	2	12
2 to 2:59 a.m.	26	4.03	3	11
3 to 3:59 a.m.	18	2.79	1	6
4 to 4:59 a.m.	9	1.39	1	4
5 to 5:59 a.m.	9	1.39	2	1
6 to 6:59 a.m.	14	2.17	2	9
7 to 7:59 a.m.	26	4.03	-	2
8 to 8:59 a.m.	18	2.79	1	1
9 to 9:59 a.m.	32	4.96	2	9
10 to 10:59 a.m.	29	4.50	3	8
11 to 11:59 a.m.	25	3.87	4	8
Noon to 12:59 p.m.	27	4.19	2	4
1 to 1:59 p.m.	30	4.65	7	17
2 to 2:59 p.m.	31	4.81	2	6
3 to 3:59 p.m.	24	3.72	3	1
4 to 4:59 p.m.	31	4.81	2	10
5 to 5:59 p.m.	27	4.19	4	6
6 to 6:59 p.m.	40	6.20	1	14
7 to 7:59 p.m.	37	5.74	3	6
8 to 8:59 p.m.	26	4.03	2	4
9 to 9:59 p.m.	27	4.19	5	8
10 to 10:59 p.m.	28	4.34	1	6
11 to 11:59 p.m.	42	6.51	3	19
Not Reported	2	.31	2	-
TOTAL	645	100.00	60	191

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	81	12.56	7	27
Monday	77	11.94	6	13
Tuesday	90	13.95	10	22
Wednesday	94	14.57	7	17
Thursday	82	12.71	9	32
Friday	101	15.66	12	36
Saturday	120	18.61	9	44
TOTAL	645	100.00	60	191

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	82	12.71	5	8
February	54	8.37	-	20
March	61	9.46	3	23
April	44	6.82	5	19
May	44	6.82	6	15
June	47	7.29	6	11
July	26	4.03	3	8
August	30	4.65	2	2
September	44	6.82	10	12
October	67	10.39	6	19
November	55	8.53	7	18
December	91	14.11	7	36
TOTAL	645	100.00	60	191

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED 1946, 1947 and 1948

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1946	549	54	168
	1947	570	42	157
	1948	601	60	189
Public Siding	1946	33	-	33
	1947	38	-	17
	1948	39	-	2
Private Siding	1946	10	-	3
	1947	5	3	3
	1948	5	-	-
Private Grade Crossing (Private Road)	1946	80	-	19
	1947	68	5	17
	1948	70	5	10

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS 1946, 1947 and 1948

CONTACT BETWEEN TRAIN AND -	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1946	125	36	161
	1947	126	33	155
	1948	133	43	169
Pedestrians	1946	23	15	10
	1947	23	12	11
	1948	23	16	7
Streetcars Autobuses Taxicabs	1946	5	1	30
	1947	3	-	9
	1948	3	-	12
Bicycles Motorcycles Wagons	1946	4	2	3
	1947	2	-	2
	1948	4	1	3

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES 1946, 1947 and 1948

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1946	232		
	1947	267		1.3
	1948	281		15.1
				5.2
Protected	1946	203		
	1947	192	5.4	
	1948	201		7.4
				4.7

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	-	4	.44
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	
Auto driven through lowered gates and struck by engine or train	-	3	5	.55
Auto stalled on crossing and struck by engine or train	-	-	8	.89
Auto struck by engine or train - gates not lowered	-	11	12	1.33
Auto struck by engine or train - gates out of order	-	-	4	.44
Auto driven into side of moving train - gates out of order	-	-	1	.11
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	36	88	311	34.44
Auto driven into side of engine or train moving over crossing	7	51	130	14.40
Auto driven into side of engine or train standing on crossing	-	11	24	2.66
Auto stalled on crossing and struck by engine or train	-	14	117	12.96
Total Accidents Involving Contact between Train and Auto	43	178	616	68.22
Auto colliding with crossing gates - No contact with train	-	2	259	28.68
Auto colliding with flashing light siganl installations-No contact with trains	-	3	28	3.10
Total Accidents Involving Automobiles at Grade Crossings	43	183	903	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	76	41	20	40	18.14
Passenger train - reverse movement	2				0.31
Freight train - normal movement	269	93	34	99	56.13
Freight train - reverse movement	5	1	1		.93
Freight train - car ahead of engine	11	6		13	2.63
Switching movement - engine normal ahead of draft	24	2		4	4.03
Switching movement - engine reverse ahead of draft	6				.93
Switching movement - engine pushing cars	12	2	2		2.17
Light engine - normal movement	58	16	2	33	11.47
Light engine - reverse movement	5	1	1		.93
Motor track cars	12				1.86
Cars not attached	2	1		2	.47
TOTAL	482	163	60	191	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1946, 1947 and 1948

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	489	1946	376*	0.769	2	7
	483	1947	394*	0.815	2	4
	472	1948	304*	0.644	-	21
Watch-man	335	1946	54	0.161	6	15
	330	1947	65	0.197	4	24
	319	1948	52	0.163	8	18
Bells	135	1946	12	0.089	-	1
	131	1947	15	0.114	-	4
	127	1948	8	0.063	1	4
Visual Signals	1196	1946	150*	0.125	3	25
	1211	1947	158*	0.130	9	44
	1254	1948	176*	0.140	13	49
Train-men	1440	1946	48	0.033	-	27
	1466	1947	49	0.033	1	12
	1465	1948	37	0.025	3	17

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1946	11	1	6
	1947	2	-	-
	1948	13	-	11
Gates out of order	1946	1	-	-
	1947	4	1	-
	1948	4	-	-
Persons passing under or around lowered gates	1946	8	6	2
	1947	5	2	3
	1948	9	6	3
Automobile driven through lowered gates striking or being struck by train.	1946	12	2	1
	1947	13	1	3
	1948	9	-	3
Unassigned	1946	6	-	3
	1947	1	-	-
	1948	8	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1946, 1947 and 1948

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1946	342		
	1947	363		6.1
	1948	259	28.7	
Flashing light signals struck and damaged	1946	20	13.0	
	1947	27		35.0
	1948	28		3.7

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1939 - 1948

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1939	32	-	24
1940	46	4	13
1941	42	2	20
1942	55	3	22
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	291	104	38	121	61.24
Cloudy	87	32	12	39	18.45
Fog	25	3	1	6	4.34
Rain	46	19	8	18	10.08
Snow	33	5	1	7	5.89
TOTAL	482	163	60	191	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	19	5		11	3.72
1 - 5	182	29	9	47	32.71
6 - 10	90	22	4	31	17.37
11 - 20	90	45	12	49	20.93
21 - 30	48	30	10	30	12.09
31 - 40	31	18	12	15	7.60
41 - 50	13	4	5	1	2.64
51 - 60	8	3	1	6	1.71
61 - 70	1	2	2	-	.46
Over 70	-	3	3	1	.46
Not Reported		2	2		.31
TOTAL	482	163	60	191	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	323	99	34	127	67.85
Wet	56	14	5	16	11.25
Muddy	2				.32
Snowy	37	11	4	14	7.72
Icy	53	7	1	15	9.65
Not Reported	11	9		12	3.21
TOTAL	482	140	44	184	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	42	5	17	6.75
21 - 30	117	10	57	18.81
31 - 40	62	4	19	9.97
41 - 50	42	5	27	6.75
51 - 60	36	7	7	5.79
Over 60	26	6	12	4.18
Not Reported	297	7	45	47.75
TOTAL	622	44	184	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	582	42	179	93.57
Female	32	2	5	5.14
Not Reported	8	-	-	1.29
TOTAL	622	44	184	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	496	36	148	79.74
Not Familiar	18	2	6	2.90
Not Reported	108	6	30	17.36
TOTAL	622	44	184	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	4			0.62
Allegheny	74	10	20	11.47
Armstrong	6		4	0.93
Beaver	4		2	0.62
Bedford	1		2	0.15
Berks	16	4	6	2.48
Blair	3		1	0.47
Bradford	7	1		1.09
Bucks	7		1	1.09
Butler	13		6	2.01
Cambria	24	1		3.72
Cameron	2			0.31
Carbon	2		1	0.31
Centre	7			1.09
Chester	4		2	0.62
Clarion	4		3	0.62
Clearfield	22	7	19	3.41
Clinton	8	2	2	1.24
Columbia	3		1	0.47
Crawford	9		1	1.40
Cumberland	11	1	2	1.70
Dauphin				
Delaware	11	4		1.70
Elk	5	1	1	0.78
Erie	32	3	9	4.96
Fayette	38	1	10	5.89
Forest				
Franklin	6	1	2	0.93
Fulton				
Greene				
Huntingdon	4			0.62
Indiana	11		4	1.70
Jefferson	5		2	0.78
Juniata				

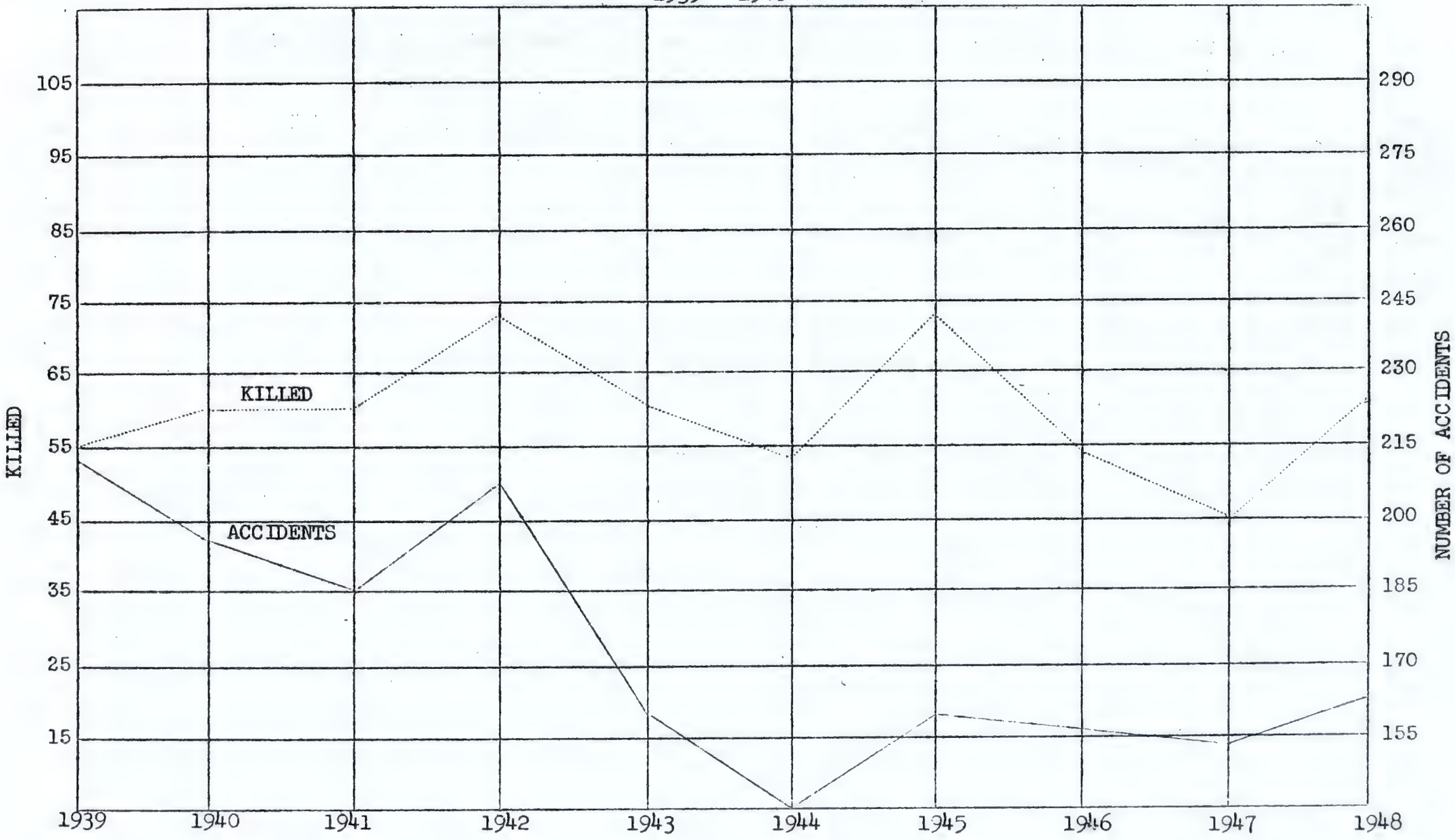
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	9	2	2	1.40
Lancaster	12	3	4	1.86
Lawrence	5		3	0.78
Lebanon	3			0.47
Lehigh	15	2	6	2.32
Luzerne	29	1	5	4.50
Lycoming	12	1	6	1.86
McKean	8		2	1.24
Mercer	18	1	10	2.79
Mifflin	2			0.31
Monroe	1			0.15
Montgomery	17	1	13	2.63
Montour	3		1	0.47
Northampton	3		1	0.47
Northumberland	19	1	5	2.94
Perry				
Philadelphia	20		10	3.10
Pike				
Potter	2			0.31
Schuylkill	9	2	4	1.40
Snyder				
Somerset	13	1	2	2.01
Sullivan				
Susquehanna	3		1	0.47
Tioga	1		1	0.15
Union	6		1	0.93
Venango	3			0.47
Warren	4	2		0.62
Washington	39	6	7	6.04
Wayne	1			0.15
Westmoreland	29	1	4	4.50
Wyoming	2			0.31
York	14		2	2.17
TOTAL	645	60	191	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1939 - 1948

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1939	11,529	529	55	280	2,122,942	2.49
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,363	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,913	645	60	191	2,717,515	2.37

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA 1939 - 1948



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
437	Collision with other vehicle	2	42	1	422	-	-	1	1	1	305	-	1	5	771	45.45	76.87
9	Collision with fixed object		1		11				5						17		1.69
40	Struck by taxicab				3			6	24				8	6	35	54.55	3.49
162	Running or walking into side of taxicab								163						163		16.25
2	Boarding or alighting (Standing vehicle)				2										2		0.20
1	Falling within vehicle				1										1		0.10
1	Caught by vehicle doors				1										1		0.10
1	Jumping on or off vehicle in motion		1												1		0.10
8	Sudden stop of vehicle		4		5				1						10		1.00
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operating of vehicle																
1	Miscellaneous		1		1										2		0.20
662	TOTAL	2	49	1	446	-	-	7	194	1	305	-	9	11	1003		
	Per Cent Killed	18.18		9.09				63.64		9.09						100.00	
	Per Cent Injured		4.89		44.47				19.34		30.41		0.89				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
450	Collision with other vehicle	2	34	3	623				6	15	351		1	20	1015	58.82	53.25
26	Collision with fixed object		7		45				3						55		2.89
152	Struck by autobus	1			2			11	141			1	14	13	157	38.24	8.24
26	Running or walking into side of autobus				12				15						27		1.42
278	Boarding or alighting (Standing vehicle)		4	1	246				29					1	279	2.94	14.64
101	Falling within vehicle				101										101		5.30
62	Caught by vehicle doors				62										62		3.25
1	Jumping on or off vehicle in motion				1										1		.05
109	Sudden stop of vehicle		1		119				1						121		6.35
19	Defect or failure of equipment		3		34				1						38		1.99
1	Vehicle skidded				1										1		.05
4	Highway defect		2		2										4		.21
4	Apparent reckless operation of vehicle		1		3										4		.21
35	Miscellaneous		20		18				3						41		2.15
1268	TOTAL	3	72	4	1269	-	-	11	199	15	351	1	15	34	1906		
	Per Cent Killed	8.82		11.77				32.35		44.12		2.94				100.00	
	Per Cent Injured		3.78		66.58				10.44		18.42		0.78				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
6	Collision with other vehicle		1		9						3				13		56.5
2	Collision with fixed object				4										4		17.5
2	Struck by autobus								2						2		8.7
	Running or walking into side of autobus																
2	Boarding or alighting (Standing vehicle)				2										2		8.7
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
1	Sudden stop of vehicle				1										1		4.3
	Defect or failure of equipment																
1	Vehicle skidded		1												1		4.3
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
14	TOTAL	-	2	-	16	-	-		2	-	3				23		
	Per Cent Killed																
	Per Cent Injured		8.7		69.5				8.7		13.1						100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
64	Collision with other vehicles	1	10		44				1	8	63			9	118	60.0	83.1
7	Collision with fixed object	1	5								1	1		2	6	13.3	4.2
13	Struck by truck							3	9			1	1	4	10	26.7	7.1
1	Running or walking into side of truck								1						1		0.7
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
1	Jumping on or off vehicle in motion						1								1		0.7
	Sudden stop of vehicle																
1	Defect or failure of equipment		2												2		1.4
1	Vehicle skidded		1												1		0.7
1	Highway defect		1												1		0.7
	Apparent reckless operation of vehicle																
2	Miscellaneous			-	1	-			1						2		1.4
91	TOTAL	2	19	-	45	-	1	3	12	8	64	2	1	15	142		
	Per Cent Killed	13.3						20.0		53.4		13.3				100.0	
	Per Cent Injured		13.4		31.7		0.7		8.4		45.1		0.7				100.0

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
18	Collision with other vehicle		6		3					5	11			5	20	55.6	64.5
3	Collision with fixed object	2	1									1		3	1	33.3	3.2
9	Struck by taxicab, autobus or truck								7			1	1	1	8	11.1	25.8
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
2	Defect or failure of equipment		2												2		6.5
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
32	TOTAL	2	9		3				7	5	11	2	1	9	31		
	Per Cent Killed	22.2								55.6		22.2				100.0	
	Per Cent Injured		29.0		9.7				22.6		35.5		3.2				100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1946	1	46	2	469	-	1	3	157	1	215	-	3	7	891
1947	1	41	1	377	-	-	4	191	2	183	-	5	8	797
1948	2	49	1	446	-	-	7	194	1	305	-	9	11	1003

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1946		51	3	1003	-	-	18	124	10	340	1	14	32	1532
1947		56	1	1326	-	-	11	159	18	348	-	26	30	1915
1948	3	72	4	1269	-	-	11	199	15	351	1	15	34	1906

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1946		1		35						1		1		38
1947				10			1				1		2	10
1948	-	2	-	16	-	-		2		3	-	-	-	23

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1946	4	29	1	10			4	16	11	61	1	4	21	120
1947	3	29	-	6			1	12	16	117		6	20	170
1948	2	19	-	45	-	1	3	12	8	64	2	1	15	142

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1946		7		8				4	2	9		1	2	29
1947		13		5			1	9	1	21			2	48
1948	2	9	-	3	-	-	-	7	5	11	2	1	9	31

K - Killed
I - Injured

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

1949

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
June 26, 1950

P 31.3

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors McShea and Johnson

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
June 26, 1950

Gentlemen:

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1949.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1949 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	63	Bridge (Toll)	11
Street Railways	11	Canal	2
Ferries	18	Electric	42
Motorboats	10	Gas (Artificial)	41
Steamboats	2	Gas (Natural)	78
Express	1	Pipe Lines	5
Bus - Scheduled Service	487	Sewerage	16
Bus - Group and Party	280	Steam Heat	23
Taxi - Call and Demand	892	Telegraph	2
Truck - Common Carrier	8038	Telephone	171
Airways	89	Water	493
Incline Plane	3	Wharfage	3
		Stock Yards	3
Total Transportation Utilities			9,894
Total Service Utilities			890
Total			10,784

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 785 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $250 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more.

Reference to the following pages, summarized on page 15, will show that in 1949 there was a substantial decrease in casualty accidents involving all transportation utilities and accidents involving service utilities also decreased. The summary which includes all utilities indicates that the total number of accidents decreased more than 17% during the year and that the number of fatalities was decreased more than 31% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1897	182	1843	24.77	56.52	20.52
Street Railway	3379	54	3993	44.14	16.77	44.46
Motor Transportation	1694	47	2475	22.13	14.60	27.56
Electric	425	23	411	5.55	7.14	4.58
Gas	123	15	119	1.61	4.66	1.32
Water	39	1	42	.51	.31	.47
Telephone & Telegraph	94	-	94	1.23	-	1.04
Other Utilities	5	-	5	.06	-	.05
TOTAL	7628*	322	8951*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	34	1358	-	144	1	148	11	400	1	99	-	39	-	91	-	5	47	2284	14.60	25.43
Trespasser	87	47	6	21	-	-	1	-	-	-	-	-	-	-	-	-	94	68	29.19	.76
Other	4	37	-	36	2	14	11	11	1	11	1	3	-	-	-	-	19	162	5.90	1.80
Passenger, Patron or Consumer	6	187	8	2560	3	1556	-	-	13	9	-	-	-	3	-	-	30	4315	9.32	48.04
Pedestrian	12	7	29	361	19	208	-	-	-	-	-	-	-	-	-	-	60	576	18.63	6.41
Occupant Other Vehicle	39	157	11	871	22	549	-	-	-	-	-	-	-	-	-	-	72	1577	22.36	17.56
TOTAL	182	1843	54	3993	47	2475	23	411	15	119	1	42	-	94	-	5	322	8951*		
Per Cent Killed	56.52		16.77		14.60		7.14		4.66		.31								100.00	
Per Cent Injured		20.52		44.46		27.56		4.58		1.32		.47		1.04		.05				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS *		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
143	Grade Crossings(for details-see appendix)	2	4	-	-	-	-	51	164	53	168	29.12	9.11
16	Collisions	-	27	-	-	-	-	-	-	-	28	-	1.51
13	Derailments	3	15	-	-	-	-	-	-	3	15	1.65	.91
76	At station or loading platform	-	5	-	26	-	-	-	45	-	76	-	4.12
11	Defect or failure of roadway or equipment	-	11	-	1	-	-	-	-	-	12		.65
54	Operating switches	-	54	-	-	-	-	-	-	-	54		2.93
41	Struck overhead or side obstruction	-	40	-	-	-	1	-	-	-	41		2.22
66	Repairing track or roadbed	-	66	-	-	-	-	-	-	-	66		3.57
75	Struck by flying missile, glass, etc.	-	65	-	10	-	-	-	2	-	77		4.17
76	Coupling or uncoupling	1	75	-	-	-	-	-	-	1	75	.55	4.07
59	Falling on locomotive or car	-	34	-	23	-	-	-	2	-	59		3.20
180	Falling from locomotive or car	4	158	5	5	-	5	-	4	9	172	4.96	9.33
268	Getting on or off locomotive or car	2	177	-	79	-	7	-	3	2	266	1.09	14.43
154	Struck by locomotive or car	18	28	-	-	83	25	2	3	103	56	56.59	3.03
78	Operating hand brakes	-	77	-	-	-	-	-	1	-	78		4.23
169	Sudden starting or stopping of trains	-	157	-	27	-	-	-	9	-	193		10.46
2	Coming in contact with catenary wire	-	-	-	-	1	1	-	-	1	1	.55	.05
40	On or about locomotive	-	40							-	40		2.16
376	Miscellaneous	4	325	1	16	3	8	2	17	10	366	5.49	19.85
1897	TOTAL	34	1358	6	187	87	47	55	251	182	1843		
	Per Cent Killed	18.68		3.30		47.80		30.22				100.00	
	Per Cent Injured		73.68		10.15		2.55		13.62				100.00

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4

STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $250 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	30	247	22.21	-40.00
YARD TRACK	217			-43.49
DERAILMENTS:				
MAIN TRACK	299	615	55.31	-31.42
YARD TRACK	316			-32.77
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		213	19.15	-29.00
MISCELLANEOUS		37	3.33	-15.91
TOTAL		1112	100.00	-33.97

Note: 442 of the 615 Derailments (71.8%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5

THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $250 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1947	2496	+ 8.19	$2,512,437	+ 24.06
1948	1684	-32.53	$3,020,998	+ 20.24
1949	1112	-33.97	$2,997,556	- 0.77

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE *	INJURED			% INCREASE OR DECREASE *
	1947	1948	1949		1947	1948	1949	
EMPLOYEES	75	56	34	- 39.29	2242	1935	1358	- 29.82
PASSENGERS	21	1	6	+500.00	434	263	187	- 28.90
TRESPASSERS	106	93	87	- 6.45	65	63	47	- 25.39
OTHERS **	62	70	55	- 21.43	320	323	251	- 22.29
TOTAL	264	220	182	- 17.27	3061	2584	1843	- 28.68

* Comparison of 1949 with 1948
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	-	29		2.14
Road Firemen	2	42	5.88	3.09
Road Conductors	1	86	2.94	6.33
Road Brakemen	7	178	20.59	13.11
Road Flagmen	-	20	-	1.47
Road Baggagemen	-	12	-	.89
Yard Enginemen and Firemen	-	62	-	4.57
Yard Brakemen and Conductors	12	655	35.29	48.23
Yard Switch Tenders	-	4	-	.29
Crossing Watchmen	-	3	-	.22
Track Walkers	-	1	-	.07
Sectionmen and Work Train Laborers	5	92	14.71	6.78
Signalmen and Signal Maintainers	-	5	-	.37
Station Baggagemen	-	8	-	.59
Car Cleaners	-	1	-	.07
Car Inspectors	-	7	-	.52
Car Repairmen	-	16	-	1.18
Carpenters	-	4	-	.29
Dining Car Employees	-	61	-	4.49
Miscellaneous	6	53	17.65	3.90
Employees Not on Duty	1	19	2.94	1.40
TOTAL	34	1358	100.00	100.00

TABLE 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

Age	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		1	3.45		11	25.00		4	4.60	1	34	18.92
31 - 40					16	36.36		9	10.34	2	44	24.87
41 - 50		8	27.58	1	7	18.18		10	11.49		37	20.00
51 - 60		10	34.48		5	11.37		39	44.83	2	34	19.46
61		1	3.45					6	6.90		2	1.08
62		1	3.45					2	2.30		3	1.62
63		2	6.90					2	2.30		5	2.70
64		2	6.90		1	2.27		1	1.15		5	2.70
65							1	1	2.30		2	1.62
Over 65		3	10.34					10	11.49		4	2.16
Not Reported		1	3.45	1	2	6.82		2	2.30		8	4.87
TOTAL	-	29	100.00	2	42	100.00	1	86	100.00	7	178	100.00

Age	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		3	15.00		14	22.58		171	25.64	1	238	21.85
31 - 40		4	20.00		10	16.12	2	167	25.34	4	250	23.22
41 - 50		5	25.00		11	17.74	2	116	17.69	3	194	18.01
51 - 60		4	20.00		14	22.58	5	126	19.64	7	232	21.85
61		1	5.00		2	3.23	1	9	1.50	1	21	2.01
62								8	1.20		14	1.28
63					3	4.34		7	1.05		19	1.74
64		1	5.00		2	3.23		6	.90		18	1.65
65		2	10.00		4	6.45		2	.30	2	11	1.18
Over 65								9	1.35		26	2.37
Not Reported					2	3.23	2	34	5.39	4	49	4.84
TOTAL	-	20	100.00	-	62	100.00	12	655	100.00	22	1072	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

No. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
47	Collision of cars	-	8	-	182	-	-	-	-	-	-	-	-	-	190		4.76
852	Collision of car and vehicle	-	14	-	344	-	-	11	867	1	17	-	33	12	1275	22.22	31.93
374	Struck by car	-	-	6	1	6	4	-	-	28	336	-	2	40	343	74.08	8.59
16	Derailment of car	-	-	-	42	-	-	-	3	-	-	-	-	-	45		1.13
	Contact with overhead or side obst.																
	Contact with trolley or feed wire or third rail																
104	Sudden stop	-	4	-	105	-	1	-	-	-	-	-	-	-	110		2.75
104	Defect or failure of roadway or eqp.	-	5	-	110	-	-	-	-	-	2	-	-	-	117		2.93
293	Caught by doors	-	-	-	294	-	-	-	-	-	-	-	-	-	294		7.36
164	Boarding standing car	-	6	-	160	-	-	-	-	-	-	-	-	-	166		4.16
484	Alighting from car	-	3	1	483	-	-	-	-	-	-	-	-	1	486	1.85	12.17
511	Falling within car	-	-	-	515	-	-	-	-	-	-	-	-	-	515		12.90
15	Jumping on or off car while in motion	-	1	-	1	-	16	-	-	-	-	-	-	-	18		.45
204	At elevated or subway platforms	-	-	1	202	-	-	-	-	-	1	-	-	1	203	1.85	5.08
43	Repair work on right of way	-	43	-	-	-	-	-	-	-	-	-	-	-	43		1.08
32	Struck by flying missile, glass, etc.	-	3	-	30	-	-	-	-	-	-	-	-	-	33		.83
136	Miscellaneous	-	57	-	91			-	1	-	5	-	1	-	155		3.88
3379	TOTAL	-	144	8	2560	6	21	11	871	29	361	-	36	54	3993		
	Per Cent Killed			14.82		11.11		20.37		53.70						100 00	
	Per Cent Injured		3.61		64.11	.	.53		21.81		9.04		.90				100.00

K - Killed; I-- Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1949 WITH 1948	YEAR			COMPARISON OF 1949 WITH 1948
	1947	1948	1949		1947	1948	1949	
Employees	3	3	-		272	228	144	- 36.84
Passengers	8	10	8	- 20.00	3010	2821	2560	- 9.25
Trespassers	9	6	6	-	14	19	21	+ 10.52
Occupants of other vehicles	14	16	11	- 31.25	1103	1039	871	- 16.16
Pedestrians	31	35	29	- 17.14	497	427	361	- 15.45
Others	1	1	-	-100.00	63	40	36	- 10.00
TOTAL	66	71	54	- 23.94	4959	4574	3993	- 12.70

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
805	Collision with other vehicle	1	122	1	821	-	-	-	1	22	549	1	1	25	1494	53.19	60.37
20	Collision with fixed object	-	6	1	72	-	-	-	2	-	-	-	-	1	80	2.13	3.23
196	Struck by auto-bus, taxicab or truck	-	1	-	2	-	-	18	171	-	-	1	13	19	187	40.42	7.56
31	Running or walking into side of auto-bus, taxicab or truck	-	-	-	-	-	-	1	32	-	-	-	-	1	32	2.13	1.29
277	Boarding or alighting (standing vehicle)	-	2	1	276	-	-	-	-	-	-	-	-	1	278	2.13	11.23
114	Falling within vehicle	-	1	-	113	-	-	-	-	-	-	-	-	-	114	-	4.61
65	Caught by vehicle doors	-	-	-	65	-	-	-	-	-	-	-	-	-	65	-	2.63
4	Jumping on or off vehicle in motion	-	1	-	3	-	-	-	-	-	-	-	-	-	4	-	.16
138	Sudden stop of vehicle	-	-	-	155	-	-	-	1	-	-	-	-	-	156	-	6.30
12	Defect or failure of equipment	-	3	-	26	-	-	-	-	-	-	-	-	-	29	-	1.17
-	Vehicle skidded	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
3	Highway defect	-	-	-	5	-	-	-	-	-	-	-	-	-	5	-	.20
1	Apparent reckless operation of vehicle	-	1	-	-	-	-	-	-	-	-	-	-	-	1	-	.04
28	Miscellaneous	-	11	-	18	-	-	-	1	-	-	-	-	-	30	-	1.21
1694	TOTAL	1	148	3	1556	-	-	19	208	22	549	2	14	47	2475		
	Per Cent Killed	2.13		6.38				40.42		46.81		4.26				100.00	
	Per Cent Injured		5.98		62.87				8.40		22.18		.57				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	892	519	3	789	644	$205,403.87
Schedule Route (Bus Service)	487	1068	31	1555	364	222,740.65
Group and Party (Bus Service)	280	9	-	11	5	5,564.01
Freight & Merchandise (Truck)	8038	78	10	96	97	120,131.88
Contract Carrier (Persons and Property)	785	20	3	24	16	24,038.58
TOTAL	10,482	1694	47	2475	1126	$577,878.99

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1947	10,758	3129	+ 16.93%	62	-	2940	+ 12.64%	$ 637,596.59	+ 28.58%
1948	11,006	3650	+ 16.65%	69	+ 11.29%	3105	+ 5.61%	741,526.44	+ 16.30%
1949	10,482	2820	- 22.74%	47	- 31.88	2475	- 20.29	577,878.99	- 22.07

Note: General Order No. 29, Revised, effective July 1, 1939, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $50 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
13	Asphyxiation		2					12		12	2	30.8	0.3
36	Automobile accident	1	35			1	8			2	43	5.1	6.4
25	Burns - not from electric source		22					1	3	1	25	2.6	3.7
14	Defect or failure of equipment or machines		14								14		2.1
2	Drowning	1				1				2		5.1	
51	Electric - Contact with charged wires or equipment	8	30	1		8	11			17	41	43.6	6.1
11	Explosion		6			1	3		5	1	14	2.6	2.1
-	Failure to use protective devices provided												
186	Falling - (Other than in water)		181			2	3		1	2	185	5.1	27.6
114	Handling materials		115								115		17.1
7	Infection from minor wounds		7								7		1.0
71	Involving use of tools - no defect		71								71		10.6
150	Miscellaneous	2	148							2	148	5.1	22.1
6	Striking against or struck by objects		6								6		0.9
686	TOTAL	12	637	1		13	25	13	9	39	671		
	Per Cent Killed	30.77		2.56		33.33		33.34				100.00	
	Per Cent Injured		94.93		-		3.73		1.34				100.00

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1947	1948	1949	COMPARISON OF 1949 WITH 1948	1947	1948	1949	COMPARISON OF 1949 WITH 1948
EMPLOYEES	13	20	12	- 40.00%	894	739	637	- 13.80%
TRESPASSERS	2	2	1	- 50.00%	8	1	-	
OTHERS	22	67	13	- 80.59%	48	39	25	- 35.90%
PATRONS OR CONSUMERS	7	22	13	- 40.91%	17	29	9	- 68.97%
TOTAL	44	111	39	- 64.86%	967	808	671	- 16.96%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
17	Automobile accident		17								17		4.14
11	Burns - not from electric source		12								12		2.92
8	Defect or failure of equipment or machinery		8								8		1.95
2	Drowning	1				1				2		8.70	
48	Electric - Contact with charged wires or equipment	8	27	1		8	11			17	38	73.90	9.25
1	Explosion		1								1		0.24
-	Failure to use protective devices provided												
108	Falling - (Other than in water)		106			2				2	106	8.70	25.79
75	Handling materials		76								76		18.49
3	Infection from minor wounds		3								3		0.73
47	Involving use of tools - no defect		47								47		11.44
104	Miscellaneous	2	102							2	102	8.70	24.81
1	Striking against or struck by objects		1								1		0.24
425	TOTAL	11	400	1	-	11	11	-	-	23	411		
	Per Cent Killed	47.83		4.34		47.83						100.00	
	Per Cent Injured		97.32				2.68						100.00

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1947	12	532	1	6	22	24	1	3	36	565
1948	15	467	1	1	62	2	-	2	78	472
1949	11	400	1	-	11	11	-	-	23	411

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
12	Asphyxiation							12	1	12	1	80.0	0.8
8	Automobile accident	1	6				6			1	12	6.7	10.1
8	Burns--not from electric source		4					1	3	1	7	6.6	5.9
3	Defect or failure of equipment or machinery		3								3		2.5
	Drowning												
	Electric - Contact with charged wires or equipment												
9	Explosion		4			1	3		5	1	12	6.7	10.1
	Failure to use protective devices provided												
24	Falling - (Other than in water)		23				2				25		21.0
24	Handling materials		24								24		20.2
2	Infection from minor wounds		2								2		1.7
10	Involving use of tools - no defect		10								10		8.4
21	Miscellaneous		21								21		17.6
2	Striking against or struck by objects		2								2		1.7
123	TOTAL	1	99			1	11	13	9	15	119		
	Per Cent Killed	6.7				6.7		86.6				100.0	
	Per Cent Injured		83.2				9.2		7.6				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1947	1	170		1		3	4	10	5	184
1948	4	156	-	-	5	31	22	24	31	211
1949	1	99	-	-	1	11	13	9	15	119

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
2	Automobile accident		3			1	2			1	5	100.0	11.9
4	Burns - not from electric source		4								4		9.5
1	Defect or failure of equipment or machines		1								1		2.4
	Drowning												
1	Electric - Contact with charged wires or equipment		1								1		2.4
	Explosion												
	Failure to use protective devices provided												
7	Falling (Other than in water)		6				1				7		16.7
6	Handling materials		6								6		14.3
2	Infection from minor wounds		2								2		4.8
8	Involving use of tools - no defect		8								8		19.0
8	Miscellaneous		8								8		19.0
	Striking against or struck by objects												
39	TOTAL		39			1	3			1	42		
	Per Cent Killed	-				100.0						100.0	
	Per Cent Injured		92.9				7.1						100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1947	-	69	-	-	-	-	2	-	2	69
1948	-	45	-	-	-	1	-	-	-	46
1949	-	39	-	-	1	3	-	-	1	42

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation		1								1		1.1
9	Automobile accident		9								9		9.6
2	Burns - not from electric source		2								2		2.1
1	Defect or failure of equipment or machines		1								1		1.1
	Drowning												
2	Electric - Contact with charged wires or equipment		2								2		2.1
1	Explosion		1								1		1.1
	Failure to use protective devices provided												
45	Falling - (Other than in water)		44						1		45		47.8
7	Handling materials		7								7		7.4
	Infection from minor wounds												
6	Involving use of tools - no defects		6								6		6.4
17	Miscellaneous		15						2		17		18.1
3	Striking against or struck by objects		3								3		3.2
94	TOTAL		91						3		94		
	Per Cent Killed												
	Per Cent Injured		96.8						3.2				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1947		102		1		19		4		126
1948	1	62	-	-		4		3	1	69
1949	-	91	-	-	-	-	-	3	-	94

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
	Automobile accident												
	Burns - not from electric source												
1	Defect or failure of equipment or machines		1								1		20.0
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
2	Falling - (Other than in water)		2								2		40.0
2	Handling materials		2								2		40.0
	Infection from minor wounds												
	Involving use of tools - no defects												
	Miscellaneous												
	Striking against or struck by objects												
5	TOTAL		5								5		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1947		21	2			2			2	23
1948		9	1			1			1	10
1949	-	5	-	-	-	-	-	-	-	5

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1947 AND 1948

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1949 WITH 1948	YEAR			COMPARISON OF 1949 WITH 1948	YEAR			COMPARISON OF 1949 WITH 1948
	1947	1948	1949		1947	1948	1949		1947	1948	1949	
Steam Railroad	2946	2577	1897	- 26.38%	264	220	182	- 17.27%	3061	2584	1843	- 28.68%
Street Railway	4068	3837	3379	- 11.93%	66	71	54	- 23.94%	4959	4574	3993	- 12.70%
Motor Transportation	1948	2067	1694	- 18.04%	62	69	47	- 31.88%	2940	3105	2475	- 20.29%
Electric	592	498	425	- 14.66%	36	78	23	- 70.51%	565	472	411	- 12.92%
Gas	183	206	123	- 40.29%	5	31	15	- 51.61%	184	211	119	- 43.60%
Water	67	46	39	- 15.22%	2	-	1	-	69	46	42	- 8.69%
Telephone & Telegraph	122	70	94	+ 34.28%	-	1	-	-100.00%	126	69	94	+ 36.23%
Other Utilities	23	11	5	- 54.54%	2	1	-	-100.00%	23	10	5	- 50.00%
TOTAL	9942*	9274*	7628*	- 17.75%	437	471	322	- 31.63%	11918*	11014*	8951*	- 18.73%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX

DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2174	19.99
Protected by trainmen	1462	13.44
Total Protected	3636	33.43
Unprotected (see note)	7241	66.57
TOTAL CROSSINGS	10,877	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	452	12.4
Watchmen	304	8.3
Flashing light signals	1257*	34.6
Other visual signals	35**	0.9
Bells	126	3.5
Trainmen	1462	40.3
TOTAL	3636	100.00

* - Additional protection by short-arm gates at 53 crossings.

** - Includes nine crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	197	58	-	5	7	3	204	66	270	55.21
Protected by gates	25	1	-	8	-	-	25	9	34	6.95
Protected by watchmen	17	4	-	1	-	-	17	5	22	4.50
Protected by bells	6	3	-	-	-	-	6	3	9	1.84
Protected by visual signals	82	24	-	4	2	-	84	28	112	22.91
Protected by trainmen	28	10	-	1	2	1	30	12	42	8.59
Total Accidents at Protected Crossings	158	42	-	14	4	1	162	57	219	44.79
Total Accidents--Non Casualty	355				11		366			74.85
Total Accidents--Casualty		100		19		4		123		25.15
TOTAL ACCIDENTS	455		19		15				489	
Per Cent of Total Accidents	93.05		3.88		3.07					100.00

NC - Non Casualty; C - Casualty
* See "Note" Page 16

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	20	60	3	2	1	3	24	65	89	44.50
Protected by gates	-	1	6	2	-	-	6	3	9	4.50
Protected by watchmen	-	7	-	1	-	-	-	8	8	4.00
Protected by bells	1	3	-	-	-	-	1	3	4	2.00
Protected by visual signals	10	33	3	1	-	-	13	34	47	23.50
Protected by trainmen	-	17	-	1	-	25	-	43	43	21.50
TOTAL	31	121	12	7	1	28	44	156	200	100.00
Killed and Injured at protected crossings	11	61	9	5	-	25	20	91	111	55.50
Per Cent of Total Killed & Injured	76.00		9.50		14.50					100.00

K - Killed; I - Injured
* See "Note" Page 16.

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1947, 1948 and 1949

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1947	2155	24	7.7	
	1948	2172	34		41.7
	1949	2174	20	41.2	
**UNPROTECTED	1947	8822	21	25.0	
	1948	8768	26		23.8
	1949	8703	24	7.7	
			INJURED		
*PROTECTED	1947	2155	68		15.3
	1948	2172	86		26.5
	1949	2174	48	44.2	
**UNPROTECTED	1947	8822	109	24.8	
	1948	8768	105	3.7	
	1949	8703	108		2.9

* - Not including those protected by trainmen

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1947	204	- 3.3%	19	- 9.5%	66	- 30.5%
		1948	207	+ 1.5%	24	+ 26.3%	79	+ 19.7%
		1949	166	- 19.8%	14	- 41.7%	51	- 35.4%
	UNPROTECTED**	1947	172	+ 17.0%	7	+ 40.0%	43	+ 10.2%
		1948	166	- 3.5%	9	+ 28.6%	37	- 13.9%
		1949	123	- 25.9%	5	- 44.4%	30	- 18.9%
RURAL	PROTECTED	1947	66	- 9.6%	6	+ 20.0%	16	- 5.9%
		1948	86	+ 30.3%	13	+ 116.7%	27	+ 68.7%
		1949	53	- 38.4%	6	- 53.8%	40	+ 48.1%
	UNPROTECTED**	1947	171	+ 6.2%	13	- 43.5%	52	- 1.9%
		1948	186	+ 8.8%	14	+ 7.7%	48	- 7.7%
		1949	147	- 21.0%	19	+ 35.7%	35	- 27.1%

* - Cities or boroughs with population over 2,500.

** - See "Note" page 16.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1947, 1948 and 1949

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1947	289		
	1948	319		4.7
	1949	233	26.9	10.4
		PERSONS KILLED		
	1947	25		
	1948	31	16.7	
	1949	25	19.3	24.0
		PERSONS INJURED		
	1947	67		
	1948	75	19.3	
	1949	83		11.9 10.7
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1947	324		
	1948	326		2.5 0.6
	1949	256	21.4	
		PERSONS KILLED		
	1947	20		
	1948	29	16.7	
	1949	19	34.5	45.0
		PERSONS INJURED		
	1947	110		
	1948	116	9.1	
	1949	73	37.1	5.4

TABLE H
HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	35	7.16	2	5
1 to 1:59 a.m.	18	3.68	-	6
2 to 2:59 a.m.	12	2.45	-	6
3 to 3:59 a.m.	8	1.64	-	-
4 to 4:59 a.m.	12	2.45	3	5
5 to 5:59 a.m.	18	3.68	5	2
6 to 6:59 a.m.	17	3.48	2	6
7 to 7:59 a.m.	13	2.66	-	3
8 to 8:59 a.m.	17	3.48	3	3
9 to 9:59 a.m.	23	4.70	4	13
10 to 10:59 a.m.	23	4.70	3	5
11 to 11:59 a.m.	20	4.09	1	8
Noon to 12:59 p.m.	15	3.07	1	5
1 to 1:59 p.m.	19	3.89	1	29
2 to 2:59 p.m.	15	3.07	5	3
3 to 3:59 p.m.	24	4.91	1	4
4 to 4:59 p.m.	19	3.89	-	4
5 to 5:59 p.m.	27	5.52	3	8
6 to 6:59 p.m.	34	6.95	3	8
7 to 7:59 p.m.	27	5.52	3	3
8 to 8:59 p.m.	30	6:13	1	14
9 to 9:59 p.m.	22	4.50	3	2
10 to 10:59 p.m.	21	4.29	-	6
11 to 11:59 p.m.	20	4.09	-	8
Not Reported	-	-	-	-
TOTAL	489	100.00	44	156

TABLE I
DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	43	8.79	2	7
Monday	64	13.09	5	11
Tuesday	67	13.70	6	19
Wednesday	70	14.32	9	21
Thursday	83	16.97	8	50
Friday	79	16.16	6	21
Saturday	83	16.97	8	27
TOTAL	489	100.00	44	156

TABLE J
MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	60	12.27	8	21
February	45	9.20	4	4
March	59	12.06	3	16
April	30	6.13	1	6
May	37	7.57	4	9
June	24	4.91	4	8
July	27	5.52	4	5
August	26	5.32	2	7
September	33	6.75	5	38
October	29	5.93	3	9
November	55	11.25	4	16
December	64	13.09	2	17
TOTAL	489	100.00	44	156

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED 1947, 1948 and 1949

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1947	570	42	157
	1948	601	60	189
	1949	449	44	116
Public Siding	1947	38	-	17
	1948	39	-	2
	1949	36	-	39
Private Siding	1947	5	3	3
	1948	5	-	-
	1949	4	-	1
Private Grade Crossing (Private Road)	1947	68	5	17
	1948	70	5	10
	1949	47	9	12

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS 1947, 1948 and 1949

CONTACT BETWEEN TRAIN AND--	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1947	126	33	155
	1948	133	43	169
	1949	100	31	121
Pedestrians	1947	23	12	11
	1948	23	16	7
	1949	19	12	7
Streetcars	1947	3	-	9
Autobuses	1948	3	-	12
Taxicabs	1949	2	1	25
Bicycles	1947	2	-	2
Motorcycles	1948	4	1	3
Wagons	1949	2	-	3

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES 1947, 1948 and 1949

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1947	267		15.1
	1948	281		5.2
	1949	204	27.4	
Protected	1947	192	5.4	
	1948	201		4.7
	1949	162	19.4	

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing			2	.29
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	-
Auto driven through lowered gates and struck by engine or train			7	.99
Auto stalled on crossing and struck by engine or train			7	.99
Auto struck by engine or train - gates not lowered		1	8	1.14
Auto struck by engine or train - gates out of order			2	.29
Auto driven into side of moving train - gates out of order			1	.14
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	26	73	234	33.19
Auto driven into side of engine or train moving over crossing	1	37	105	14.89
Auto driven into side of engine or train standing on crossing	3	8	18	2.55
Auto stalled on crossing and struck by engine or train	2	2	70	9.93
Total Accidents Involving Contact between Train and Auto	32	121	454	64.40
Auto colliding with crossing gates - No contact with train		2	218	30.92
Auto colliding with flashing light signal installations-No contact with trains			33	4.68
Total Accidents Involving Automobiles at Grade Crossings	32	123	705	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	51	29	18	25	16.36
Passenger train - reverse movement	2	-	-	-	.41
Freight train - normal movement	207	74	25	76	57.47
Freight train - reverse movement	6	2	-	4	1.63
Freight train - car ahead of engine	7	2	-	2	1.84
Switching movement - engine normal ahead of draft	16	5	-	10	4.30
Switching movement - engine reverse ahead of draft	2	-	-	-	.41
Switching movement - engine pushing cars	12	2	-	26	2.86
Light engine - normal movement	52	9	1	13	12.47
Light engine - reverse movement	7	-	-	-	1.43
Motor track cars	4	-	-	-	.82
Cars not attached	-	-	-	-	
TOTAL	366	123	44	156	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1947, 1948 and 1949

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	483	1947	394*	0.815	2	4
	472	1948	304*	0.644	-	21
	452	1949	249*	0.550	-	3
Watch-man	330	1947	65	0.197	4	24
	319	1948	52	0.163	8	18
	304	1949	39	0.128	-	7
Bells	131	1947	15	0.114	-	4
	127	1948	8	0.063	1	4
	126	1949	9	0.071	1	3
Visual Signals	1211	1947	158*	0.130	9	44
	1254	1948	176*	0.140	13	49
	1292	1949	141*	0.109	10	33
Train-men	1466	1947	49	0.033	1	12
	1465	1948	37	0.025	3	17
	1462	1949	39	0.027	-	18

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1947	2	-	-
	1948	13	-	11
	1949	8	-	1
Gates out of order	1947	4	1	-
	1948	4	-	-
	1949	2	-	-
Persons passing under or around lowered gates	1947	5	2	3
	1948	9	6	3
	1949	8	6	2
Automobile driven through lowered gates striking or being struck by train.	1947	13	1	3
	1948	9	-	3
	1949	9	-	-
Unassigned	1947	1	-	-
	1948	8	-	-
	1949	7	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1947, 1948 and 1949

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1947	363		
	1948	259	28.7	
	1949	218	16.9	
Flashing light signals struck and damaged	1947	27		
	1948	28		3.7
	1949	33		17.8

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1940 - 1949

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1940	46	4	13
1941	42	2	20
1942	55	3	22
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	247	89	30	124	68.71
Cloudy	57	13	10	9	14.31
Fog	4				.82
Rain	41	12	1	15	10.84
Snow	17	9	3	8	5.32
TOTAL	366	123	44	156	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	12	6	3	8	3.68
1 - 5	146	28	1	69	35.59
6 - 10	64	25	4	29	18.20
11 - 20	64	23	5	25	17.79
21 - 30	33	19	13	17	10.63
31 - 40	24	10	7	5	6.95
41 - 50	13	7	6	2	4.09
51 - 60	6	4	4	1	2.05
61 - 70	2	-	-	-	.41
Over 70	-	1	1		.20
Not Reported	2				.41
TOTAL	366	123	44	156	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	265	78	27	121	72.98
Wet	58	14	-	18	15.32
Muddy	1	-	-	-	.21
Snowy	17	10	4	9	5.75
Icy	15	-	-	-	3.19
Not Reported	10	2	1	1	2.55
TOTAL	366	104	32	149	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	32	-	17	6.81
21 - 30	80	3	26	17.02
31 - 40	43	2	25	9.15
41 - 50	38	5	9	8.09
51 - 60	27	15	10	5.74
Over 60	18	4	10	3.83
Not Reported	232	3	52	49.36
TOTAL	470	32	149	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	424	30	137	90.21
Female	31	2	12	6.60
Not Reported	15	-	-	3.19
TOTAL	470	32	149	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	372	25	125	79.15
Not Familiar	20	-	7	4.25
Not Reported	78	7	17	16.60
TOTAL	470	32	149	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	6		1	1.23
Allegheny	54	5	10	11.04
Armstrong	10	3	1	2.05
Beaver	8	2		1.64
Bedford	3		1	.61
Berks	4	3	1	.82
Blair	6			1.23
Bradford	2	1		.41
Bucks	2			.41
Butler	8	1	1	1.64
Cambria	12		1	2.45
Cameron	2	1		.41
Carbon	1			.20
Centre	5			1.02
Chester	5		1	1.02
Clarion	2			.41
Clearfield	20	1	9	4.09
Clinton	3			.61
Columbia	4		4	.82
Crawford	8	2	2	1.64
Cumberland	10		4	2.05
Dauphin	3			.61
Delaware	11	1	2	2.25
Elk	4	1		.82
Erie	21	3	6	4.30
Fayette	15		2	3.07
Forest				
Franklin	5		8	1.02
Fulton				
Greene				
Huntingdon	1		3	.20
Indiana	6		1	1.23
Jefferson	9	2	9	1.84
Juniata				

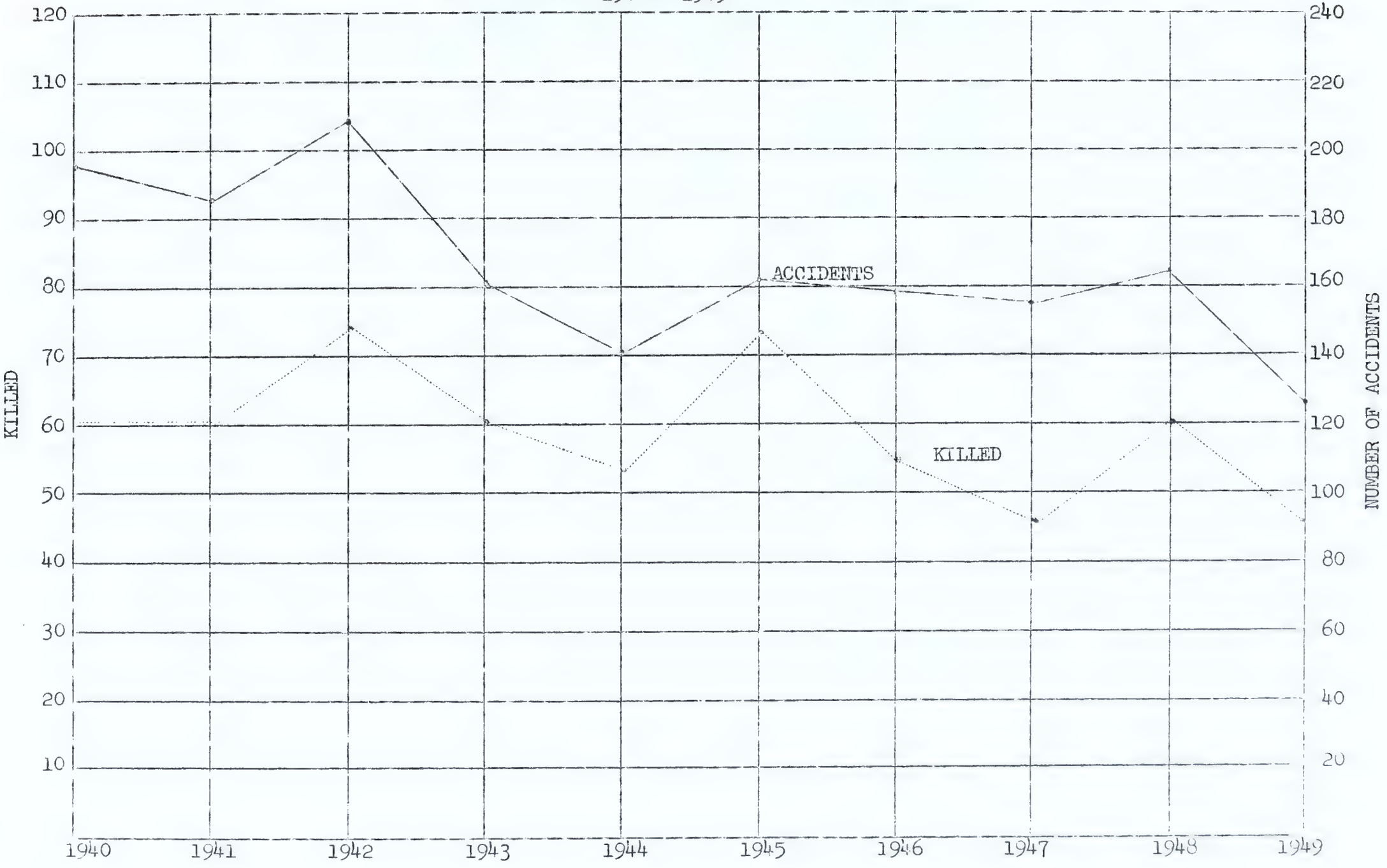
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	6	1		1.23
Lancaster	13		3	2.66
Lawrence	6	1	3	1.23
Lebanon	4	1	2	.82
Lehigh	9		3	1.84
Luzerne	19		5	3.88
Lycoming	14	4	1	2.86
McKean	6		1	1.23
Mercer	18			3.68
Mifflin	4		1	.82
Monroe				
Montgomery	12	1	6	2.45
Montour	1		1	.20
Northampton	3		1	.61
Northumberland	14		2	2.86
Perry	1			.20
Philadelphia	24		39	4.92
Pike				
Potter				
Schuylkill	12	3	4	2.45
Snyder	1			.20
Somerset	9	3	3	1.84
Sullivan				
Susquehanna				
Tioga	4	3	1	.82
Union	3		1	.61
Venango	2			.41
Warren	6		1	1.23
Washington	20		4	4.09
Wayne	1			20
Westmoreland	12	1	2	2.45
Wyoming				
York	15		5	3.07
TOTAL	489	44	156	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1940 - 1949

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1940	11,411	660	60	248	2,209,763	2.99
1941	11,343	734	60	219	2,354,363	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA 1940 - 1949



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
410	Collision with other vehicle		77		384				1	1	212			1	674	33.34	85.42
5	Collision with fixed object		2		5										7		.89
68	Struck by taxicab							1	68					1	68	33.33	8.62
25	Running or walking into side of taxicab							1	26					1	26	33.33	3.30
1	Boarding or alighting (Standing vehicle				1										1		.13
	Falling within vehicle																
2	Caught by vehicle doors				2										2		.25
2	Jumping on or off vehicle in motion				2										2		.25
5	Sudden stop of vehicle				7				1						8		1.01
1	Defect or failure of equipment				1										1		.13
	Vehicle skidded																
	Highway defect																
	Apparent reckless operating of vehicle																
	Miscellaneous																
519	TOTAL		79		402			2	96	1	212			3	789		
	Per Cent Killed							66.67		33.33						100.00	
	Per Cent Injured		10.01		50.95				12.17		26.87						100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
322	Collision with other vehicle		21	1	426					14	271	1	1	16	719	51.62	46.24
11	Collision with fixed object			1	67				2					1	69	3.22	4.44
107	Struck by autobus		1		2			12	87			1	12	13	102	41.94	6.56
6	Running or walking into side of autobus								6						6		.39
276	Boarding or alighting (Standing vehicle)		2	1	275									1	277	3.22	17.81
114	Falling within vehicle		1		113										114		7.33
63	Caught by vehicle doors				63										63		4.05
1	Jumping on or off vehicle in motion				1										1		.06
130	Sudden stop of vehicle				145										145		9.33
9	Defect or failure of equipment		1		25										26		1.67
	Vehicle skidded																
3	Highway defect				5										5		.32
1	Apparent reckless operation of vehicle		1												1		.06
25	Miscellaneous		8		18				1						27		1.74
1068	TOTAL		35	3	1140			12	96	14	271	2	13	31	1555		
	Per Cent Killed			9.68				38.71		45.16		6.45				100.00	
	Per Cent Injured		2.25		73.31				6.17		17.43		.84				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
6	Collision with other vehicle				2						6				8		72.7
	Collision with fixed object																
	Struck by autobus																
	Running or walking into side of autobus																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
3	Sudden stop of vehicle				3										3		27.3
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
9	TOTAL	-	-	-	5	-	-	-	-	-	6	-	-	-	11		
	Per Cent Killed																
	Per Cent Injured				45.5						54.5						100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
53	Collision with other vehicles		20		8					5	47			5	75	50.0	78.2
4	Collision with fixed object		4												4		4.2
16	Struck by truck							5	12					5	12	50.0	12.5
	Running or walking into side of truck																
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
1	Jumping on or off vehicle in motion		1												1		1.0
	Sudden stop of vehicle																
1	Defect or failure of equipment		1												1		1.0
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
3	Miscellaneous		3												3		3.1
78	TOTAL		29		8			5	12	5	47			10	96		
	Per Cent Killed							50.0		50.0						100.0	
	Per Cent Injured		30.2		8.3				12.5		49.0						100.0

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
14	Collision with other vehicle	1	4		1					2	13			3	18	100.0	75.0
	Collision with fixed object																
5	Struck by taxicab, autobus or truck								4				1		5		20.8
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment		1												1		4.2
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
20	TOTAL	1	5		1				4	2	13		1	3	24		
	Per Cent Killed	33.3								66.7						100.0	
	Per Cent Injured		20.8		4.2				16.6		54.2		4.2				100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1947	1	41	1	377	-	-	4	191	2	183	-	5	8	797
1948	2	49	1	446	-	-	7	194	1	305	-	9	11	1003
1949	-	79	-	402	-	-	2	96	1	212	-	-	3	789

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1947	-	56	1	1326	-	-	11	159	18	348	-	26	30	1915
1948	3	72	4	1269	-	-	11	199	15	351	1	15	34	1906
1949	-	35	3	1140	-	-	12	96	14	271	2	13	31	1555

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1947	-	-	-	10	-	-	1	-	-	-	1	-	2	10
1948	-	2	-	16	-	-	-	2	-	3	-	-	-	23
1949	-	-	-	5	-	-	-	-	-	6	-	-	-	11

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1947	3	29	-	6	-	-	1	12	16	117	-	6	20	170
1948	2	19	-	45	-	1	3	12	8	64	2	1	15	142
1949	-	29	-	8	-	-	5	12	5	47	-	-	10	96

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1947	-	13	-	5	-	-	1	9	1	21	-	-	2	48
1948	2	9	-	3	-	-	-	7	5	11	2	1	9	31
1949	1	5	-	1	-	-	-	4	2	13	-	1	3	24

K - Killed
I - Injured

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

1950

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
July 30, 1951

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
July 30, 1951

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors McShea and Johnson

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1950.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1950 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	63	Bridge (Toll)	11
Street Railways	11	Canal	1
Ferries	18	Electric	37
Motorboats	11	Gas (Artificial)	40
Steamboats	2	Gas (Natural)	79
Express	1	Pipe Lines	6
Bus - Scheduled Service	482	Sewerage	17
Bus - Group and Party	295	Steam Heat	22
Taxi - Call and Demand	781	Telegraph	2
Truck - Common Carrier	7641	Telephone	165
Airways	82	Water	491
Incline Plane	3	Wharfage	3
		Stock Yards	3

Total Transportation Utilities	9,390
Total Service Utilities	877
Total	10,267

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 740 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $250 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1950 there was a substantial decrease in casualty accidents involving all transportation utilities and accidents involving service utilities also decreased. The summary which includes all utilities indicated that the total number of accidents decreased 1.76% during the year and that the number of fatalities was decreased 13% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1890	137	1999	25.15	49.10	23.00
Street Railway	3159	50	3713	42.04	17.92	42.71
Motor Transportation	1756	51	2287	23.37	18.28	26.31
Electric	461	36	437	6.14	12.90	5.03
Gas	111	3	119	1.48	1.08	1.37
Water	31	1	30	.41	.36	.35
Telephone & Telegraph	97	0	99	1.29		1.14
Other Utilities	9	1	8	.12	.36	.09
TOTAL	7494*	279	8659*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	29	1422	-	163	4	182	14	417	-	93	-	30	-	92	-	8	47	2407	16.85	27.70
Trespasser	66	56	3	24	-	2	-	1	-	-	-	-	-	-	1	-	70	83	25.09	.95
Other	1	91	2	29	-	15	22	17	3	22	1	-	-	7	-	-	29	181	10.39	2.08
Passenger, Patron or Consumer	-	253	4	2317	5	1350	-	2	-	4	-	-	-	-	-	-	9	3926	3.22	45.16
Pedestrian	9	3	29	323	14	317	-	-	-	-	-	-	-	-	-	-	52	643	18.64	7.40
Occupant Other Vehicle	32	174	12	857	28	421	-	-	-	-	-	-	-	-	-	-	72	1452	25.81	16.71
TOTAL	137	1999	50	3713	51	2287	36	437	3	119	1	30	-	99	1	8	279	8659*		
Per Cent Killed	49.10		17.92		18.28		12.90		1.08		.36				.36				100.00	
Per Cent Injured		23.00		42.71		26.31		5.03		1.37		.35		1.14		.09				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
154	Grade Crossings(for details-see appendix)	1	3					41	177	42	180	30.66	9.01
18	Collisions	2	63		75				9	2	147	1.46	7.35
11	Derailments	1	18		7					1	25	.73	1.25
59	At station or loading platform		6		13				40		59		2.95
18	Defect or failure of roadway or equipment		17		1						18		.90
56	Operating switches		56								56		2.80
37	Struck overhead or side obstruction	1	36							1	36	.73	1.80
55	Repairing track or roadbed		58								58		2.90
69	Struck by flying missile, glass, etc.		57		10				4		71		3.55
78	Coupling or uncoupling	2	76							2	76	1.46	3.80
68	Falling on locomotive or car		54		14						68		3.40
187	Falling from locomotive or car	5	168		12	1	5			6	185	4.38	9.26
334	Getting on or off locomotive or car		237		85		10		2		334		16.71
147	Struck by locomotive or car	16	35		1	63	31	1	1	80	68	58.39	3.40
64	Operating hand brakes		64								64		3.20
160	Sudden starting or stopping of trains		139		21				19		179		8.96
2	Coming in contact with catenary wire	1					1			1	1	.73	.05
38	On or about locomotive		38								38		1.90
335	Miscellaneous		297		14	2	9		16	2	336	1.46	16.81
1890	TOTAL	29	1422	-	253	66	56	42	268	137	1999		
	Per Cent Killed	21.17		-		48.17		30.66				100.00	
	Per Cent Injured		71.13		12.66		2.80		13.41				100.00

K - Killed; I - Injured

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $250 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	24			- 20.00
YARD TRACK	220	244	18.91	+ 1.38
DERAILMENTS:				
MAIN TRACK	356			+ 19.06
YARD TRACK	400	756	58.61	+ 26.58
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		255	19.77	+ 19.72
MISCELLANEOUS		35	2.71	- 5.41
TOTAL		1290	100.00	+ 16.01

Note: 516 of the 756 Derailments (68.3%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $250 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1948	1684	- 32.53	$3,020,998	+ 20.24
1949	1112	- 33.97	$2,997,556	- 0.77
1950	1290	16.01	$3,612,054	+ 20.50

TABLE NO. 6

THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE *	INJURED			% INCREASE OR DECREASE *
	1948	1949	1950		1948	1949	1950	
EMPLOYEES	56	34	29	- 14.71	1935	1358	1422	+ 4.71
PASSENGERS	1	6	-	-100.00	263	187	253	+ 35.29
TRESPASSERS	93	87	66	- 21.14	63	47	56	+ 19.15
OTHERS **	70	55	42	- 23.64	323	251	268	+ 6.77
TOTALS	220	182	137	- 24.73	2584	1843	1999	+ 8.46

* Comparison of 1950 with 1949
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	1	35	3.45	2.46
Road Firemen	-	54	-	3.80
Road Conductors	1	66	3.45	4.64
Road Brakemen	5	179	17.24	12.60
Road Flagmen	-	29	-	2.04
Road Baggagemen	-	11	-	.77
Yard Enginemen and Firemen	1	66	3.45	4.64
Yard Brakemen and Conductors	8	719	27.58	50.57
Yard Switch Tenders	-	-	-	-
Crossing Watchmen	-	5	-	.35
Track Walkers	1	-	3.45	-
Sectionmen and Work Train Laborers	3	98	10.34	6.89
Signalmen and Signal Maintainers	-	3	-	.21
Station Baggagemen	-	1	-	.07
Car Cleaners	-	3	-	.21
Car Inspectors	1	9	3.45	.63
Car Repairmen	2	10	6.90	.70
Carpenters	-	5	-	.35
Dining Car Employees	1	79	3.45	5.56
Miscellaneous	4	39	13.79	2.74
Employees Not on Duty	1	11	3.45	.77
TOTAL	29	1422	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		1	2.78		8	14.82		10	14.92	1	31	17.39
31 - 40		3	8.33		23	42.59		8	11.94	2	49	27.72
41 - 50		4	11.11		14	25.93	1	21	32.84	1	31	17.39
51 - 60	1	15	44.44		2	3.70		8	11.94		37	20.11
61								5	7.46		4	2.17
62		6	16.66		2	3.70					4	2.17
63		1	2.78								4	2.17
64		1	2.78		1	1.85					4	2.17
65		1	2.78					6	8.96		2	1.09
Over 65		2	5.56					6	8.96		6	3.27
Not Reported		1	2.78		4	7.41		2	2.98	1	7	4.35
TOTAL	1	35	100.00	-	54	100.00	1	66	100.00	5	179	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21								2	.27		2	.17
21 - 30		3	10.35		19	28.36		201	27.65	1	273	23.54
31 - 40		4	13.79		11	16.42	2	209	29.02	4	307	26.72
41 - 50		6	20.69	1	10	16.42	2	102	14.31	5	188	16.58
51 - 60		14	48.27		9	13.44	2	123	17.19	3	208	18.13
61					4	5.97		3	.41	-	16	1.37
62					2	2.98		9	1.24	-	23	1.97
63					1	1.49	1	6	.96	1	12	1.12
64		1	3.45		1	1.49		5	.69	-	13	1.12
65					2	2.98		14	1.93	-	25	2.15
Over 65		1	3.45		4	5.97		10	1.38	-	29	2.49
Not Reported					3	4.48	1	35	4.95	2	52	4.64
TOTAL	-	29	100.00	1	66	100.00	8	719	100.00	16	1148	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

No. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
27	Collision of cars	-	3	-	80	-	-	-	-	-	-	-	-	-	83		2.24
871	Collision of car and vehicle	-	21	-	402	-	-	12	854	-	8	2	24	14	1309	28.00	35.25
349	Struck by car	-	1	2	11	3	3	-	-	29	303	-	3	34	321	68.00	8.65
14	Derailment of car	-	3	-	29	-	-	-	-	-	-	-	1	-	33		.89
	Contact with overhead or side obst.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Contact with trolley or feed wire or third rail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
73	Sudden stop	-	1	-	79	-	-	-	-	-	-	-			80		2.15
76	Defect or failure of roadway or eqp.	-	1	-	76	-	-	-	3	-	3	-	-	-	83		2.24
200	Caught by doors	-	1	-	199	-	-	-	-	-	-	-	-	-	200		5.39
130	Boarding standing car	-	1	-	129	-	-	-	-	-	-	-	-	-	130		3.50
437	Alighting from car	-	11	1	426	-	-	-	-	-	-	-	-	1	437	2.00	11.77
540	Falling within car	-	2	-	539	-	1	-	-	-	-	-	-	-	542		14.60
16	Jumping on or off car while in motion	-	-	-	-	-	16	-	-	-	-	-	-	-	16		.43
214	At elevated or subway platforms	-	-	1	215	-	-	-	-	-	-	-	-	1	215	2.00	5.79
45	Repair work on right of way	-	44	-	1	-	-	-	-	-	-	-	-	-	45		1.21
28	Struck by flying missile, glass, etc.	-	8	-	23	-	-	-	-	-	-	-	-	-	31		.83
139	Miscellaneous	-	66	-	108	-	4	-	-	-	9	-	1	-	188		5.06
3159	TOTAL	-	163	4	2317	3	24	12	857	29	323	2	29	50	3713		
	Per Cent Killed			8.00		6.00		24.00		58.00		4.00				100.00	
	Per Cent Injured		4.39		62.40		0.65		23.08		8.70		0.78				100.00

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1950 WITH 1949	YEAR			COMPARISON OF 1950 WITH 1949
	1948	1949	1950		1948	1949	1950	
Employees	3	-	-		228	144	163	+ 13.19
Passengers	10	8	4	- 50.00	2821	2560	2317	- 9.49
Trespassers	6	6	3	- 50.00	19	21	24	+ 14.28
Occupants of other vehicles	16	11	12	+ 9.09	1039	871	857	- 1.61
Pedestrians	35	29	29		427	361	323	- 10.52
Others	1	-	2		40	36	29	- 19.44
TOTAL	71	54	50	- 7.41	4574	3993	3713	- 7.01

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
727	Collision with other vehicle	3	154	4	636	-	-	-	6	28	419	-	2	35	1217	68.63	53.21
24	Collision with fixed object	1	4	1	35	-	-	-	1	-	1	-	-	2	41	3.92	1.79
157	Struck by auto-bus, taxicab or truck	-	1	-	13	-	-	14	132	-	-	-	11	14	157	27.45	6.87
165	Running or walking into side of auto-bus, taxicab or truck	-	-	-	-	-	-	-	166	-	-	-	-	-	166		7.26
295	Boarding or alighting (standing vehicle)	-	-	-	295	-	-	-	-	-	-	-	-	-	295		12.90
101	Falling within vehicle	-	1	-	90	-	-	-	12	-	-	-	-	-	103		4.50
86	Caught by vehicle doors	-	-	-	86	-	-	-	-	-	-	-	-	-	86		3.76
8	Jumping on or off vehicle in motion	-	-	-	6	-	2	-	-	-	-	-	-	-	8		.35
137	Sudden stop of vehicle	-	-	-	148	-	-	-	-	-	-	-	-	-	148		6.47
19	Defect or failure of equipment	-	3	-	17	-	-	-	-	-	1	-	2	-	23		1.01
1	Vehicle skidded	-	-	-	6	-	-	-	-	-	-	-	-	-	6		.26
3	Highway defect	-	2	-	1	-	-	-	-	-	-	-	-	-	3		.13
7	Apparent reckless operation of vehicle	-	4	-	3	-	-	-	-	-	-	-	-	-	7		.31
26	Miscellaneous	-	13	-	14	-	-	-	-	-	-	-	-	-	27		1.18
1756	TOTAL	4	182	5	1350	-	2	14	317	28	421	-	15	51	2287		
	Per Cent Killed	7.84		9.81		-		27.45		54.90						100.00	
	Per Cent Injured		7.96		59.03		0.09		13.86		18.41		.65				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	781	552	8	748	331	$176,979.13
Schedule Route (Bus Service)	482	1093	23	1392	311	277,848.84
Group and Party (Bus Service)	295	3	-	8	4	1,925.00
Freight & Merchandise (Truck)	7641	74	18	95	133	165,401.27
Contract Carrier (Persons and (Property)	740	34	2	44	43	65,950.61
TOTAL	9939	1756	51	2287	822	$ 688,104.85

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PRE-VIOUS YEAR	NUMBER	COMPARISON WITH PRE-VIOUS YEAR	NUMBER	COMPARISON WITH PRE-VIOUS YEAR	AMOUNT	COMPARISON WITH PRE-VIOUS YEAR
1948	11,006	3650	+ 16.65%	69	+11.29%	3105	+ 5.61%	$741,526.44	+ 16.30%
1949	10,482	2320	- 22.74%	47	- 31.88%	2475	-20.29%	577,878.99	- 22.07%
1950	9,939	2578	- 8.58%	51	+ 8.51%	2287	- 7.59%	688,104.85	+ 19.07%

Note: General Order No. 29, Revised, February 20, 1950, provides that only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 (Previously $50) or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
2	Asphyxiation						4				4		0.6
34	Automobile accident		29			1	5			1	34	2.4	4.9
23	Burns - not from electric source		22				7		1		30		4.3
15	Defect or failure of equipment or machines		13			4			1	4	14	9.8	2.0
2	Drowning					3				3		7.3	
48	Electric - Contact with charged wires or equipment	9	18		1	16	12			25	31	61.0	4.5
6	Explosion		4						2		6		0.9
2	Failure to use protective devices provided	1	1							1	1	2.4	0.1
216	Falling - (Other than in water)	3	200			2	9		2	5	211	12.2	30.4
118	Handling materials		117				1				118		17.0
13	Infection from minor wounds		13								13		1.9
94	Involving use of tools - no defect		94								94		13.6
120	Miscellaneous	1	112	1			7			2	119	4.9	17.6
16	Striking against or struck by object		17				1				18		2.6
709	TOTAL	14	640	1	1	26	46		6	41	693		
	Per Cent Killed	34.15		2.44		63.41						100.00	
	Per Cent Injured		92.45		0.14		6.64		0.87				100.00

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1948	1949	1950	COMPARISON OF 1950 WITH 1949	1948	1949	1950	COMPARISON OF 1950 WITH 1949
Employees	20	12	14	+ 16.67%	739	637	640	+ 0.47%
Trespassers	2	1	1	-	1	-	1	-
Others	67	13	26	+ 100.00%	39	25	46	+ 84.00%
Patrons or Consumers	22	13	-	-	20	9	6	- 33.33%
TOTAL	111	39	41	+ 5.13%	808	671	693	+ 3.28%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
12	Automobile accident		12			1				1	12	2.78	2.75
10	Burns - not from electric source		11								11		2.52
9	Defect or failure of equipment or machinery		8			1				1	8	2.78	1.83
1	Drowning					2				2		5.55	
48	Electric - Contact with charged wires or equipment	9	18		1	16	12			25	31	69.44	7.09
1	Explosion		1								1		.23
1	Failure to use protective devices provided	1								1		2.78	
138	Falling - (Other than in water)	3	129			2	2		2	5	133	13.89	30.43
70	Handling materials		70								70		16.02
9	Infection from minor wounds		9								9		2.06
69	Involving use of tools - no defect		69								69		15.79
83	Miscellaneous	1	80				3			1	83	2.78	18.99
10	Striking against or struck by objects		10								10		2.29
461	TOTAL	14	417		1	22	17		2	36	437		
	Per Cent Killed	38.89				61.11						100.00	
	Per Cent Injured		95.42		0.23		3.89		0.46				100.00

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1948	15	467	1	1	62	2	-	2	78	472
1949	11	400	1	-	11	11	-	-	23	411
1950	14	417	-	1	22	17	-	2	36	437

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
2	Asphyxiation						4				4		3.4
5	Automobile accident		3				2				5		4.2
12	Burns - not from electric source		10				7		1		18		15.1
4	Defect or failure of equipment or machinery		3			3			1	3	4	100.0	3.4
	Drowning												
	Electric - Contact with charged wires or equipment												
4	Explosion		2						2		4		3.4
1	Failure to use protective devices provided		1								1		0.8
37	Falling - (Other than in water)		31				6				37		31.1
22	Handling materials		22								22		18.5
	Infection from minor wounds												
9	Involving use of tools - no defect		9								9		7.6
14	Miscellaneous		12				2				14		11.7
1	Striking against or struck by objects						1				1		0.8
111	TOTAL		93			3	22		4	3	119		
	Per Cent Killed					100.0						100.0	
	Per Cent Injured		78.1				18.5		3.4				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1948	4	156	-	-	5	31	22	24	31	211
1949	1	99	-	-	1	11	13	9	15	119
1950	-	93	-	-	3	22	-	4	3	119

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
	Automobile accident												
	Burns - not from electric source												
	Defect or failure of equipment or machines												
1	Drowning					1				1		100.0	
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
3	Falling (Other than in water)		3								3		10.0
8	Handling materials		8								8		26.7
3	Infection from minor wounds		3								3		10.0
7	Involving use of tools - no defect		7								7		23.3
7	Miscellaneous		7								7		23.3
2	Striking against or struck by objects		2								2		6.7
31	TOTAL		30			1				1	30		
	Per Cent Killed					100.0						100.0	
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1948	-	45	-	-	-	1	-	-	-	46
1949	-	39	-	-	1	3	-	-	1	42
1950	-	30	-	-	1	-	-	-	1	30

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
17	Automobile accident		14				3				17		17.2
1	Burns - not from electric source		1								1		1.0
2	Defect or failure of equipment or machines		2								2		2.0
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
37	Falling - (Other than in water)		36				1				37		37.4
15	Handling materials		14				1				15		15.1
1	Infection from minor wounds		1								1		1.0
8	Involving use of tools - no defects		8								8		8.1
13	Miscellaneous		11				2				13		13.1
3	Striking against or struck by objects		5								5		5.1
97	TOTAL		92				7				99		
	Per Cent Killed												
	Per Cent Injured		92.9				7.1						100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1948	1	62	-	-	-	4	-	3	1	69
1949	-	91	-	-	-	-	-	3	-	94
1950	-	92	-	-	-	7	-	-	-	99

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
	Automobile accident												
	Burns - not from electric source												
	Defect or failure of equipment or machines												
	Drowning												
	Electric - Contact with charged wires or equipment												
1	Explosion		1								1		12.5
	Failure to use protective devices provided												
1	Falling - (Other than in water)		1								1		12.5
3	Handling materials		3								3		37.5
	Infection from minor wounds												
1	Involving use of tools - no defects		1								1		12.5
3	Miscellaneous		2	1						1	2	100.0	25.0
	Striking against or struck by objects												
9	TOTAL		8	1						1	8		
	Per Cent Killed			100.00								100.00	
	Per Cent Injured		100.00										100.00

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1948	-	9	1	-	-	1	-	-	1	10
1949	-	5	-	-	-	-	-	-	-	5
1950	-	8	1	-	-	-	-	-	1	8

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1948 and 1949

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON of 1950 WITH 1949	YEAR			COMPARISON of 1950 WITH 1949	YEAR			COMPARISON of 1950 WITH 1949
	1948	1949	1950		1948	1949	1950		1948	1949	1950	
Steam Railroad	2577	1897	1890	- 0.37%	220	182	137	- 24.73%	2584	1843	1999	+ 8.46%
Street Railway	3837	3379	3159	- 6.51%	71	54	50	- 7.41%	4574	3993	3713	- 7.01%
Motor Transportation	2067	1694	1756	+ 3.66%	69	47	51	+ 8.51%	3105	2475	2287	- 7.59%
Electric	498	425	461	+ 8.47%	78	23	36	+ 56.52%	472	411	427	+ 6.33%
Gas	206	123	111	- 9.76%	31	15	3	- 80.00%	211	119	119	-
Water	46	39	31	- 20.50%	-	1	1	-	46	42	30	- 28.57%
Telephone & Telegraph	70	94	97	+ 3.19%	1	-	-	-	69	94	99	+ 5.05%
Other Utilities	11	5	9	+ 80.00%	1	-	1	-	10	5	8	+ 60.00%
TOTAL	9274*	7628*	7494*	- 1.76%	471	322	279	- 13.35%	11014*	8951*	8659*	- 3.26%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2172	20.01
Protected by trainmen	1474	13.58
Total Protected	3646	33.59
Unprotected (see note)	7208	66.41
TOTAL CROSSINGS	10,854	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	434	11.90
Watchmen	284	7.79
Flashing light signals	1297*	35.57
Other visual signals	35**	0.9
Bells	122	3.34
Trainmen	1474	40.43
TOTAL	3646	100.00

* - Additional protection by short-arm gates at 77 crossings.
** - Includes nine crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	213	70	-	2	2	2	215	74	289	52.55
Protected by gates	17	4	-	4	-	-	17	8	25	4.55
Protected by watchmen	18	4	-	1	-	1	18	6	24	4.36
Protected by bells	11	-	-	-	-	-	11	-	11	2.00
Protected by visual signals	109	35	-	5	2	-	111	40	151	27.45
Protected by trainmen	44	5	-	-	-	1	44	6	50	9.09
Total Accidents at Protected Crossings	199	48	-	10	2	2	201	60	261	47.45
Total Accidents--Non Casualty	412				4		416			75.64
Total Accidents--Casualty		118		12		4		134		24.36
TOTAL ACCIDENTS	530		12		8				550	
Per Cent of Total Accidents	93.36		2.18		1.46					100.00

NC - Non Casualty; C - Casualty
* See "Note" Page 16

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	18	89	1	1	1	2	20	92	112	57.44
Protected by gates	1	3	4	-	-	-	5	3	8	4.10
Protected by watchmen	-	5	-	1	-	1	-	7	7	3.59
Protected by bells	-	-	-	-	-	-	-	-	-	-
Protected by visual signals	9	42	4	1	-	-	13	43	56	28.72
Protected by trainmen	-	9	-	-	-	3	-	12	12	6.15
TOTAL	28	148	9	3	1	6	38	157	195	100.00
Killed and Injured at protected crossings	10	59	8	2	-	4	18	65	83	42.56
Per Cent of Total Killed & Injured	90.26		6.15		3.59					100.00

K - Killed; I - Injured
* See "Note" Page 16.

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1948, 1949 and 1950

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1948	2172	34		41.7
	1949	2174	20	41.2	
	1950	2172	18	10.0	
**UNPROTECTED	1948	8768	26		23.8
	1949	8703	24	7.7	
	1950	8682	20	16.7	
			INJURED		
*PROTECTED	1948	2172	86		26.5
	1949	2174	48	44.2	
	1950	2172	65		35.4
**UNPROTECTED	1948	8768	105	3.7	
	1949	8703	108		2.9
	1950	8682	92	14.8	

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1948	207	+ 1.5%	24	+ 26.3%	79	+ 19.7%
		1949	166	- 19.8%	14	- 41.7%	51	- 35.4%
		1950	192	+ 15.7%	12	- 14.3%	49	- 3.9%
	UNPROTECTED**	1948	166	- 3.5%	9	+ 28.6%	37	- 13.9%
		1949	123	- 25.9%	5	- 44.4%	30	- 18.9%
		1950	136	+ 10.6%	6	+ 20.0%	31	+ 3.3%
RURAL	PROTECTED	1948	86	+ 30.3%	13	+ 116.7%	27	+ 68.7%
		1949	53	- 38.4%	6	- 53.8%	40	+ 48.1%
		1950	69	+ 30.2%	6	-	16	- 60.0%
	UNPROTECTED**	1948	186	+ 8.8%	14	+ 7.7%	48	- 7.7%
		1949	147	- 21.0%	19	+ 35.7%	35	- 27.1%
		1950	153	+ 4.1%	14	- 26.3%	61	+ 74.3%

* - Cities or boroughs with population over 2,500.

** - See "Note" Page 16.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1948, 1949 and 1950

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1948	319		10.4
	1949	233	26.9	
	1950	254		9.0
		PERSONS KILLED		
	1948	31		24.0
	1949	25	19.3	
	1950	25	-	-
		PERSONS INJURED		
	1948	75		11.9
	1949	83		10.7
	1950	64	22.9	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1948	326		0.6
	1949	256	21.4	
	1950	296		16.6
	1948	29		45.0
	1949	19	34.5	
	1950	13	31.6	
		PERSONS INJURED		
	1948	116		5.4
	1949	73	37.1	
	1950	93		27.4

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	13	2.36	-	2
1 to 1:59 a.m.	19	3.45	-	6
2 to 2:59 a.m.	14	2.55	-	1
3 to 3:59 a.m.	16	2.91	-	2
4 to 4:49 a.m.	7	1.27	-	3
5 to 5:59 a.m.	19	3.45	-	7
6 to 6:59 a.m.	21	3.82	2	5
7 to 7:59 a.m.	18	3.27	-	5
8 to 8:59 a.m.	21	3.82	1	6
9 to 9:59 a.m.	18	3.27	7	2
10 to 10:59 a.m.	19	3.45	1	5
11 to 11:59 a.m.	21	3.82	2	9
Noon to 12:59 p.m.	25	4.55	1	2
1 to 1:59 p.m.	17	3.09	1	4
2 to 2:59 p.m.	27	4.91	1	3
3 to 3:59 p.m.	21	3.82	4	7
4 to 4:59 p.m.	31	5.64	2	9
5 to 5:59 p.m.	26	4.73	2	7
6 to 6:59 p.m.	29	5.27	3	5
7 to 7:59 p.m.	30	5.45	1	5
8 to 8:59 p.m.	36	6.55	5	25
9 to 9:59 p.m.	35	6.37	-	8
10 to 10:59 p.m.	37	6.73	1	16
11 to 11:59 p.m.	30	5.45	-	13
Not Reported				
TOTAL	550	100.00	38	157

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	50	9.09	6	13
Monday	76	13.82	4	12
Tuesday	89	16.18	6	33
Wednesday	70	12.73	2	18
Thursday	88	16.00	6	19
Friday	91	16.54	7	27
Saturday	86	15.64	7	35
TOTAL	550	100.00	38	157

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	34	6.18	2	6
February	32	5.82	1	9
March	63	11.45	7	24
April	36	6.55	2	11
May	32	5.82	1	10
June	33	6.00	6	13
July	38	6.91	6	16
August	50	9.09	3	15
September	35	6.36	3	7
October	34	6.13	4	5
November	60	10.91	-	18
December	103	18.73	3	23
TOTAL	550	100.00	38	157

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED
1948, 1949 and 1950

CHARACTER OF TRACK	YEAR	CASUALTY & NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1948	601	60	189
	1949	449	44	116
	1950	503	38	146
Public Siding	1948	39	-	2
	1949	36	-	39
	1950	39	-	8
Private Siding	1948	5	-	-
	1949	4	-	1
	1950	8	-	3
Private Grade Crossing (Private Road)	1948	70	5	10
	1949	47	9	12
	1950	77	4	23

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1948, 1949 and 1950

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1948	133	43	169
	1949	100	31	121
	1950	119	29	149
Pedestrians	1948	23	16	7
	1949	19	12	7
	1950	12	9	3
Streetcars Autobuses Taxicabs	1948	3	-	12
	1949	2	1	25
	1950	3	-	5
Bicycles Motorcycles Wagons	1948	4	1	3
	1949	2	-	3
	1950	-	-	-

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES
1948, 1949 and 1950

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1948	281		
	1949	204	27.4	5.2
	1950	215		5.4
Protected	1948	201		
	1949	162	19.4	4.7
	1950	201		24.1

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	-	1	.12
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	-
Auto driven through lowered gates and struck by engine or train	1	-	4	.47
Auto stalled on crossing and struck by engine or train	-	-	6	.71
Auto struck by engine or train - gates not lowered	-	2	6	.71
Auto struck by engine or train - gates out of order	-	1	4	.47
Auto driven into side of moving train - gates out of order	-	-	2	.23
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	23	94	296	34.82
Auto driven into side of engine or train moving over crossing	1	41	110	12.94
Auto driven into side of engine or train standing on crossing	-	7	25	2.94
Auto stalled on crossing and struck by engine or train	4	9	84	9.88
Total Accidents Involving Contact between Train and Auto	29	154	538	63.29
Auto colliding with crossing gates - No contact with train	-	1	272	32.00
Auto colliding with flashing light signal installations-No contact with trains	-	3	40	4.71
Total Accidents Involving Automobiles at Grade Crossings	29	158	850	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	51	25	14	21	13.82
Passenger train - reverse movement	1	-	-	-	.18
Freight train - normal movement	269	76	20	92	62.73
Freight train - reverse movement	2	1	1	-	.55
Freight train - car ahead of engine	5	3	-	3	1.45
Switching movement - engine normal ahead of draft	20	4	-	5	4.36
Switching movement - engine reverse ahead of draft	1	-	-	-	.18
Switching movement - engine pushing cars	11	4	-	7	2.73
Light engine - normal movement	44	16	2	17	10.91
Light engine - reverse movement	4	4	1	10	1.45
Motor track cars	5	1	-	2	1.09
Cars not attached	3	-	-	-	.55
TOTAL	416	134	38	157	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1948, 1949 and 1950

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	472	1948	304*	0.644	-	21
	452	1949	249*	0.550	-	3
	432	1950	300*	0.694	1	10
Watch-man	319	1948	52	0.163	8	18
	304	1949	39	0.128	-	7
	284	1950	38	0.133	-	8
Bells	127	1948	8	0.063	1	4
	126	1949	9	0.071	1	3
	122	1950	11	0.090	-	-
Visual Signals	1254	1948	176*	0.140	13	49
	1292	1949	141*	0.109	10	33
	1332	1950	186*	0.139	9	45
Train-men	1465	1948	37	0.025	3	17
	1462	1949	39	0.027	-	18
	1474	1950	50	0.034	-	12

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1948	13	-	11
	1949	8	-	1
	1950	6	-	2
Gates out of order	1948	4	-	-
	1949	2	-	-
	1950	4	-	1
Persons passing under or around lowered gates	1948	9	6	3
	1949	8	6	2
	1950	4	4	-
Automobile driven through lowered gates striking or being struck by train.	1948	9	-	3
	1949	9	-	-
	1950	5	1	-
Unassigned	1948	8	-	-
	1949	7	-	-
	1950	6	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1948, 1949 and 1950

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1948	259		
	1949	218	28.7	
	1950	272	16.9	24.7
Flashing light signals struck and damaged	1948	28		
	1949	33		3.7
	1940	40		17.8
				21.2

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1941 - 1950

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1941	42	2	20
1942	55	3	22
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	233	84	26	106	57.64
Cloudy	81	21	4	22	18.54
Fog	22	5	1	5	4.91
Rain	47	14	6	12	11.09
Snow	33	10	1	12	7.82
TOTAL	416	134	38	157	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE
CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	21	4	-	7	4.55
1 - 5	152	28	2	42	32.73
6 - 10	75	21	3	27	17.45
11 - 20	81	36	10	38	21.27
21 - 30	38	26	9	25	11.64
31 - 40	26	12	11	11	6.91
41 - 50	14	5	-	7	3.45
51 - 60	6	1	2	-	1.27
61 - 70	-	1	1	-	.18
Over 70	-	-	-	-	-
Not Reported	3	-	-	-	.55
TOTAL	416	134	38	157	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE
CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	270	85	21	109	65.99
Wet	65	18	6	19	15.43
Muddy	1	-	-	-	.18
Snowy	34	12	1	14	8.55
Icy	32	2	-	4	6.32
Not Reported	14	5	1	8	3.53
TOTAL	416	122	29	154	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	26	1	13	4.83
21 - 30	91	4	42	16.92
31 - 40	55	4	12	10.22
41 - 50	40	1	14	7.43
51 - 60	29	5	13	5.39
Over 60	35	6	17	6.51
Not Reported	262	8	43	48.70
TOTAL	538	29	154	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	484	27	137	89.96
Female	42	-	13	7.81
Not Reported	12	2	4	2.23
TOTAL	538	29	154	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE
CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	423	22	116	78.62
Not Familiar	17	-	3	3.16
Not Reported	98	7	35	18.22
TOTAL	538	29	154	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	4		1	.73
Allegheny	59	8	18	10.72
Armstrong	9	1	1	1.64
Beaver	6			1.09
Bedford	3		3	.55
Berks	6	3		1.09
Blair	7			1.27
Bradford	5		3	.91
Bucks	5		3	.91
Butler	5		2	.91
Cambria	19		3	3.45
Cameron	2			.36
Carbon	3	1	3	.55
Centre	5		1	.91
Chester	5			.91
Clarion	6		2	1.09
Clearfield	12		1	2.18
Clinton	4	1		.73
Columbia	7		1	1.27
Crawford	7		5	1.27
Cumberland	6		2	1.09
Dauphin	1			.18
Delaware	4		1	.73
Elk	8	1	2	1.45
Erie	30	1	4	5.45
Fayette	18		8	3.27
Forest	1	1	1	.18
Franklin	6		3	1.09
Fulton				
Greene				
Huntingdon	1			.18
Indiana	10		2	1.82
Jefferson	5	1	2	.91
Juniata				

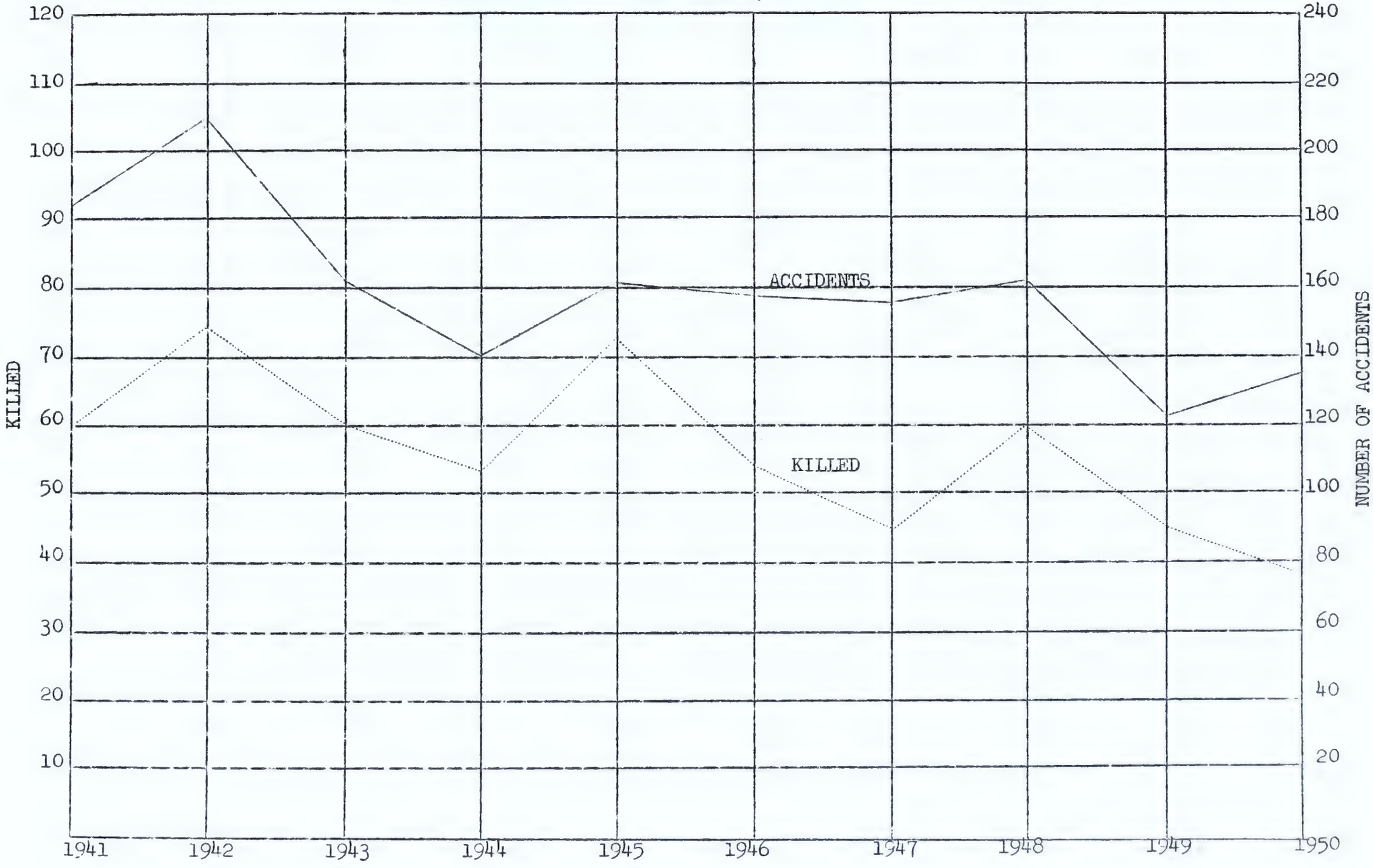
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	12		3	2.18
Lancaster	10		3	1.82
Lawrence	11	1	6	2.00
Lebanon	6			1.09
Lehigh	7	1	7	1.27
Luzerne	20		6	3.64
Lycoming	11			2.00
McKean	4	1	1	.73
Mercer	20	1	3	3.64
Mifflin	3			.55
Monroe				
Montgomery	16	5	4	2.91
Montour				
Northampton	7	2	1	1.27
Northumberland	26	1	5	4.73
Perry				
Philadelphia	8		3	1.45
Pike	1			.18
Potter				
Schuylkill	9		3	1.64
Snyder	3		5	.55
Somerset	10		7	1.82
Sullivan				
Susquehanna	1	1	1	.18
Tioga	2		1	.36
Union	3		2	.55
Venango	4	2		.73
Warren	8	1	3	1.45
Washington	22	3	11	4.00
Wayne				
Westmoreland	31		10	5.64
Wyoming				
York	26	1		4.73
TOTAL	550	[illegible]	157	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1941 - 1950

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1941	11,343	734	60	219	2,354,363	3.12
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA 1941 - 1950



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
326	Collision with other vehicle		102	2	280				6	3	121			5	509	62.50	68.05
6	Collision with fixed object	1	2	1	8									2	10	25.00	1.34
58	Struck by taxicab				8			1	55				2	1	65	12.50	8.69
139	Running or walking into side of taxicab								140						140		18.72
1	Boarding or alighting (Standing vehicle)				1										1		.13
1	Falling within vehicle				1										1		.13
8	Caught by vehicle doors				8										8		1.07
4	Jumping on or off vehicle in motion				4										4		.53
6	Sudden stop of vehicle				6										6		.80
2	Defect or failure of equipment				2										2		.27
	Vehicle skidded																
	Highway defect																
	Apparent reckless operating of vehicle																
1	Miscellaneous		1		1										2		.27
552	TOTAL	1	105	3	319	-	-	1	201	3	121	-	2	8	748		
	Per Cent Killed	12.50		37.50				12.50		37.50						100.00	
	Per Cent Injured		14.04		42.64				26.87		16.18		0.26				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
313	Collision with other vehicle		34	2	332					11	215		2	13	583	56.52	41.88
14	Collision with fixed object				26				1						27		1.94
87	Struck by autobus				5			10	69				9	10	83	43.48	5.96
26	Running or walking into side of autobus								26						26		1.87
294	Boarding or alighting (Standing vehicle)				294										294		21.12
100	Falling within vehicle		1		89				12						102		7.33
78	Caught by vehicle doors				78										78		5.60
3	Jumping on or off vehicle in motion				1		2								3		.22
131	Sudden stop of vehicle				142										142		10.20
14	Defect or failure of equipment		2		14										16		1.15
1	Vehicle skidded				6										6		.43
3	Highway defect		2		1										3		.22
5	Apparent reckless operation of vehicle		2		3										5		.36
24	Miscellaneous		11		13										24		1.72
1093	TOTAL	-	52	2	1004	-	2	10	108	11	215	-	11	23	1392		
	Per Cent Killed			8.69				43.48		47.83						100.00	
	Per Cent Injured		3.74		72.13		0.14		7.76		15.44		0.79				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
2	Collision with other vehicle				6						1				7		87.5
1	Collision with fixed object				1										1		12.5
	Struck by autobus																
	Running or walking into side of autobus																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
3	TOTAL	-	-	-	7	-	-	-	-	-	1	-	-	-	8	-	
	Per Cent Killed															-	
	Per Cent Injured				87.5						12.5						100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
60	Collision with other vehicles	3	15		12					13	56			16	83	88.9	87.37
	Collision with fixed object																
9	Struck by truck							2	7					2	7	11.1	7.37
	Running or walking into side of truck																
	Boarding or alighting (Standing Vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
1	Jumping on or off vehicle in motion				1										1		1.05
	Sudden stop of vehicle																
2	Defect or failure of equipment		1		1										2		2.11
	Vehicle skidded																
	Highway defect																
1	Apparent reckless operation of vehicle		1												1		1.05
1	Miscellaneous		1												1		1.05
74	TOTAL	3	18	-	14	-	-	2	7	13	56	-	-	18	95		
	Per Cent Killed	16.7						11.1		72.2						100.0	
	Per Cent Injured		18.9		14.7				7.4		59.0						100.0

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
26	Collision with other vehicle		3		6					1	26			1	35	50.0	79.5
3	Collision with fixed object		2								1				3		6.8
3	Struck by taxicab, autobus or truck		1					1	1					1	2	50.0	4.6
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment										1		2		3		6.8
	Vehicle skidded																
	Highway defect																
1	Apparent reckless operation of vehicle		1												1		2.3
	Miscellaneous																
34	TOTAL	-	7	-	6	-	-	1	1	1	28	-	2	2	44		
	Per Cent Killed							50.0		50.0						100.0	
	Per Cent Injured		15.9		13.6				2.3		63.6		4.6				100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1948	2	49	1	446	-	-	7	194	1	305	-	9	11	1003
1949	-	79	-	402	-	-	2	96	1	212	-	-	3	789
1950	1	105	3	319	-	-	1	201	3	121	-	2	8	748

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1948	3	72	4	1269	-	-	11	199	15	351	1	15	34	1906
1949	-	35	3	1140	-	-	12	96	14	271	2	13	31	1555
1950	-	52	2	1004	-	2	10	108	11	215	-	11	23	1392

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1948	-	2	-	16	-	-	-	2	-	3	-	-	-	23
1949	-	-	-	5	-	-	-	-	-	6	-	-	-	11
1950	-	-	-	7	-	-	-	-	-	1	-	-	-	8

K - Killed
I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1948	2	19	-	45	-	1	3	12	8	64	2	1	15	142
1949	-	29	-	8	-	-	5	12	5	47	-	-	10	96
1950	3	18	-	14	-	-	2	7	13	56	-	-	18	95

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1948	2	9	-	3	-	-	-	7	5	11	2	1	9	31
1949	1	5	-	1	-	-	-	4	2	13	-	1	3	24
1950	-	7	-	6	-	-	1	1	1	28	-	2	2	44

K - Killed
I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

1951

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
July 28, 1952

AUG 28 1952

STATES
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PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
July 28, 1952

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors McShea and Johnson

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1951.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1951 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	62	Canal	1
Street Railways	10	Electric	37
Ferries	18	Gas (Artificial)	42
Motorboats	10	Gas (Natural)	67
Steamboats	2	Pipe Lines	6
Express	1	Severage	17
Bus - Scheduled Service	480	Steam Heat	21
Bus - Group and Party	303	Telegraph	2
Taxi - Call and Demand	767	Telephone	151
Truck - Common Carrier	7281	Water	495
Airways	75	Wharfage	3
Incline Plane	3	Stock Yards	3

Total Transportation Utilities	9,012
Total Service Utilities	845
Total	9,857

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 673 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $250 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1951 there was an increase in casualty accidents involving all transportation utilities and also in accidents involving service utilities. The summary which includes all utilities indicates that the total number of accidents increased 6.83% during the year and that the number of fatalities was increased 3.23% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS
INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	2134	168	2153	26.59	58.33	23.31
Street Railway	3377	38	3935	42.08	13.19	42.60
Motor Transportation	1797	35	2401	22.39	12.15	26.00
Electric	484	34	471	6.03	11.81	5.10
Gas	97	10	139	1.21	3.47	1.51
Water	25	1	24	.31	.35	.26
Telephone & Telegraph	110	2	111	1.37	.70	1.20
Other Utilities	2	-	2	.02		.02
TOTAL	8006*	288	9209*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELE-PHONE AND TELE-GRAPH		OTHER UTIL-ITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	25	1681	1	155	7	169	12	445	1	88	1	23	1	100	-	2	48	2663	16.67	28.8
Trespasser	69	48	2	15	-	1	-	-	-	-	-	-	-	1	-	-	71	65	24.65	.7
Other	2	91	-	39	4	10	22	26	7	49	-	1	1	10	-	-	36	226	12.50	2.4
Passenger, Patron or Consumer	9	177	5	2461	3	1456	-	-	2	2	-	-	-	-	-	-	19	4096	6.60	44 3
Pedestrian	8	5	16	301	4	335	-	-	-	-	-	-	-	-	-	-	28	641	9.72	6 9
Occupant Other Vehicle	55	151	14	904	17	430	-	-	-	-	-	-	-	-	-	-	86	1545	29.86	16 7
TOTAL	168	2153	38	3935	35	2401	34	471	10	139	1	24	2	111	-	2	288	9209*		
Per Cent Killed	58.33		13.19		12.15		11.81		3.47		0.35		0.70		-				100.00	
Per Cent Injured		23.31		42.60		26.00		5.10		1.51		0.26		1.20		0.02				100.0

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
160	Grade Crossings (for details-see appendix)	-	8					63	156	63	164	37.50	7.62
24	Collisions	1	41	7	44			1	15	9	100	5.36	4.65
13	Derailments	1	17		1	1	1		1	2	20	1.19	.92
61	At station or loading platform		6		8				47		61		2.83
23	Defect or failure of roadway or equipment		23		1						24		1.11
77	Operating switches		77								77		3.58
47	Struck overhead or side obstruction	3	42		2					3	44	1.78	2.04
81	Repairing track or roadbed		81								81		3.76
78	Struck by flying missile, glass, etc.		72		2		1		3		78		3.62
103	Coupling or uncoupling	2	102							2	102	1.19	4.74
71	Falling on locomotive or car		56		14				1		71		3.30
208	Falling from locomotive or car	7	190		5	2	3		2	9	200	5.36	9.29
358	Getting on or off locomotive or car		278		69		9		2		358		16.63
136	Struck by locomotive or car	9	39			60	23	1	4	70	66	41.67	3.07
113	Operating hand brakes		113								113		5.25
185	Sudden starting or stopping of trains		180		19				5		204		9.47
-	Coming in contact with catenary wire												
32	On or about locomotive		32								32		1.49
364	Miscellaneous	2	324	2	12	6	11		11	10	358	5.95	16.63
2134	TOTAL	25	1681	9	177	69	48	65	247	168	2153		
	Per Cent Killed	14.88		5.36		41.07		38.69				100.00	
	Per Cent Injured		78.08		8.22		2.23		11.47				100.00

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $250 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	29			+ 20.83
YARD TRACK	243	272	20.06	+ 10.45
DERAILMENTS:				
MAIN TRACK	378			+ 6.18
YARD TRACK	429	807	59.51	+ 7.25
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		238	17.55	- 6.66
MISCELLANEOUS		39	2.88	+ 11.43
TOTAL		1356	100.00	+ 5.11

Note: 550 of the 807 Derailments (68.15%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $250 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1949	1112	- 33.97	2,997,556	- 0.77
1950	1290	+ 16.01	3,612,054	+ 20.50
1951	1356	+ 5.11	4,331,343	+ 19.91

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE *	INJURED			% INCREASE OR DECREASE *
	1949	1950	1951		1949	1950	1951	
EMPLOYEES	34	29	25	- 13.78	1358	1422	1681	+ 18.21
PASSENGERS	6	-	9	-	187	253	177	- 30.03
TRESPASSERS	87	66	69	+ 4.54	47	56	48	- 14.28
OTHERS **	55	42	65	+ 54.76	251	268	247	- 7.84
TOTALS	182	137	168	+ 22.63	1843	1999	2153	+ 7.70

* Comparison of 1951 with 1950
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	-	38	-	2.26
Road Firemen	1	51	4.00	3.03
Road Conductors	2	99	8.00	5.89
Road Brakemen	3	217	12.00	12.91
Road Flagmen	-	35	-	2.08
Road Baggagemen	-	6	-	.36
Yard Enginemen and Firemen	1	82	4.00	4.88
Yard Brakemen and Conductors	13	896	52.00	53.30
Yard Switch Tenders	-	3	-	.18
Crossing Watchmen	-	2	-	.12
Track Walkers	-	-	-	-
Sectionmen and Work Train Laborers	3	94	12.00	5.59
Signalmen and Signal Maintainers	-	9	-	.53
Station Baggagemen	-	3	-	.18
Car Cleaners	-	1	-	.06
Car Inspectors	-	7	-	.42
Car Repairmen	2	4	8.00	.24
Carpenters	-	4	-	.24
Dining Car Employees	-	74	-	4.40
Miscellaneous	-	36	-	2.14
Employees Not on Duty	-	20	-	1.19
TOTAL	25	1681	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21											1	.45
21 - 30					8	15.38		4	3.96		41	18.64
31 - 40		2	5.26		22	42.31		13	12.87		48	21.82
41 - 50		6	15.79		12	23.08	1	14	14.85		43	19.55
51 - 60		14	36.85		5	9.62	1	33	33.67	2	44	20.91
61								6	5.94		1	.45
62		2	5.26					3	2.97		4	1.82
63		1	2.63					3	2.97		8	3.64
64		4	10.53					2	1.98		3	1.36
65		1	2.63		1	1.92		4	3.96		5	2.27
Over 65		2	5.26		1	1.92		7	6.93		6	2.73
Not Reported		6	15.79	1	2	5.77		10	9.90	1	13	6.36
TOTAL	-	38	100.00	1	51	100.00	2	99	100.00	3	217	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21								7	.77		8	.56
21 - 30		4	11.43		27	32.53	2	282	31.25	2	366	25.59
31 - 40		7	20.00		18	21.69	6	258	29.04	6	368	26.01
41 - 50		7	20.00		11	13.25		99	10.89	1	192	13.42
51 - 60		10	28.57		13	15.66		121	13.31	3	240	16.90
61		1	2.86		1	1.21		7	.77		16	1.11
62		2	5.71		1	1.21	2	13	1.65	2	25	1.83
63		1	2.86		2	2.41		15	1.65		30	2.09
64		1	2.86				1	8	.99	1	18	1.32
65					2	2.41	1	2	.33	1	15	1.11
Over 65		2	5.71		3	3.61	1	13	1.54	1	34	2.43
Not Reported				1	4	6.02		71	7.81	3	106	7.58
TOTAL	-	35	100.00	1	82	100.00	13	896	100.00	20	1418	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

No. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
41	Collision of cars	-	7	-	148	-	-	-	-	-	-	-	-	-	155	-	3.94
965	Collision of car and vehicle	-	27	-	362	-	-	14	963	2	8	-	38	16	1398	42.11	35.53
302	Struck by car	1	-	3	5	1	1	-	-	14	284	-	-	19	290	50.00	7.37
6	Derailment of car	-	-	-	9	-	-	-	-	-	-	-	-	-	9	-	.23
10	Contact with overhead or side obst.	-	-	-	10	-	-	-	-	-	-	-	-	-	10	-	.25
-	Contact with trolley or feed wire or third rail	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
41	Sudden stop	-	-	-	47	-	-	-	-	-	-	-	-	-	47	-	1.19
65	Defect or failure of roadway or eqp.	-	6	-	60	-	-	-	1	-	1	-	-	-	68	-	1.73
241	Caught by doors	-	-	-	242	-	-	-	-	-	-	-	-	-	242	-	6.15
121	Boarding standing car	-	4	-	117	-	-	-	-	-	-	-	-	-	121	-	3.08
488	Alighting from car	-	16	-	475	-	-	-	-	-	-	-	-	-	491	-	12.48
596	Falling within car	-	2	-	596	-	-	-	-	-	-	-	-	-	598	-	15.20
11	Jumping on or off car while in motion	-	-	-	-	1	10	-	-	-	-	-	-	1	10	2.63	.25
300	At elevated or subway platforms	-	-	2	299	-	2	-	-	-	-	-	-	2	301	5.26	7.65
47	Repair work on right of way	-	45	-	1	-	-	-	-	-	1	-	-	-	47	-	1.19
41	Struck by flying missile, glass, etc.	-	11	-	30	-	-	-	-	-	2	-	-	-	43	-	1.09
102	Miscellaneous	-	37	-	60	-	2	-	-	-	5	-	1	-	105	-	2.67
3377	TOTAL	1	155	5	2461	2	15	14	964	16	301	-	39	38	3935		
	Per Cent Killed	2.63		13.16		5.26		38.84		42.11		-				100.00	
	Per Cent Injured		3.94		62.54		0.38		24.50		7.65		.99				100.00

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1951 WITH 1950	YEAR			COMPARISON OF 1951 WITH 1950
	1949	1950	1951		1949	1950	1951	
Employees	-	-	1	-	144	163	155	- 4.91%
Passengers	8	4	5	+ 25.00%	2560	2317	2461	+ 6.21%
Trespassers	6	3	2	- 33.33%	21	24	15	- 37.50%
Occupants of other vehicles	11	12	14	+ 16.66%	871	857	964	+ 12.48%
Pedestrians	29	29	16	- 44.82%	361	323	[illegible]	- 6.81%
Others	-	2	-	[illegible]	36	29	39	+ 34.48%
TOTAL	54	50	38	- 24.[illegible]	3993	3713	[illegible]	+ 5.98%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
714	Collision with other vehicle	6	128	3	668	-	-	-	5	17	426	-	2	26	1229	74.28	51.19
29	Collision with fixed object	-	11	-	78	-	-	-	-	-	-	1	-	1	89	2.86	3.71
154	Struck by auto-bus, taxicab or truck	-	1	-	6	-	-	2	138	-	-	3	8	5	153	14.29	6.37
185	Running or walking into side of auto-bus, taxicab or truck	-	-	-	1	-	-	2	186	-	-	-	-	2	187	5.71	7.79
278	Boarding or alighting (standing vehicle)	-	3	-	276	-	-	-	-	-	-	-	-		279		11.62
105	Falling within vehicle	-	-	-	106	-	-	-	-	-	-	-	-		106		4.41
73	Caught by vehicle doors	-	-	-	73	-	-	-	-	-	-	-	-		73		3.04
6	Jumping on or off vehicle in motion	-	2	-	8	-	1	-	-	-	-	-	-		11		.46
164	Sudden stop of vehicle	-	-	-	172	-	-	-	-	-	-	-	-		172		7.16
22	Defect or failure of equipment	-	6	-	14	-	-	-	1	-	2	-	-		23		.96
7	Vehicle skidded	-	-	-	10	-	-	-	4	-	2	-	-		16		.67
9	Highway defect	-	5	-	4	-	-	-	-	-	-	-	-		9		.37
1	Apparent reckless operation of vehicle	-	1	-	-	-	-	-	-	-	-	-	-		1		0.04
50	Miscellaneous	1	12	-	40	-	-	-	1	-	-	-	-	1	53	2.86	2.21
1797	TOTAL	7	169	3	1456	-	1	4	335	17	430	4	10	35	2401		
	Per Cent Killed	20.00		8.57		-		11.43		48.57		11.43				100.00	
	Per Cent Injured		7.04		60.64		0.04		13.95		17.91		0.42				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASULATY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	767	537	1	695	291	$159,041.90
Schedule Route (Bus Service)	480	1173	12	1603	337	295,809.85
Group and Party (Bus Service)	303	5	-	10	3	4,156.30
Freight & Merchandise (Truck)	7281	71	18	84	113	163,349.85
Contract Carrier (Persons and Property)	673	11	4	9	25	29,838.95
TOTAL	9504	1797	35	2401	769	$652,196.85

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

		CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
YEAR	NUMBER OF REGULATED OPERATORS	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1949	10,482	2820	- 22.74%	47	- 31.88%	2475	- 20.29%	$577,878.99	- 22.07%
1950	9,939	2578	- 8.58%	51	+ 8.51%	2287	- 7.59%	688,104.85	+ 19.07%
1951	9,504	2566	- 0.47%	35	- 31.37%	2401	+ 4.98%	652,196.85	- 5.22%

Note: Only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
3	Asphyxiation					3	1			3	1	6.4	0.1
42	Automobile accident	1	34			1	12			2	46	4.2	6.2
18	Burns - not from electric source	1	18			2	1			3	19	6.4	2.5
6	Defect or failure of equipment or machines		7								7		1.0
-	Drowning												
48	Electric - Contact with charged wires or equipment	6	24			17	15			23	39	48.9	5.2
9	Explosion	1	3			4	43	2	1	7	47	14.9	6.3
-	Failure to use protective devices provided												
229	Falling - (Other than in water)	3	215			1	9		1	4	225	8.5	30.1
90	Handling materials		90								90		12.0
7	Infection from minor wounds		8								8		1.1
65	Involving use of tools - no defect		65								65		8.7
84	Miscellaneous		84		1						85		11.4
117	Striking against or struck by object	3	110			2	5			5	115	10.7	15.4
718	TOTAL	15	658	-	1	30	86	2	2	47	747		
	Per Cent Killed	31.9				63.8		4.3				100.00	
	Per Cent Injured		88.1		0.1		11.5		0.3				100.00

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1949	1950	1951	COMPARISON OF 1951 WITH 1950	1949	1950	1951	COMPARISON OF 1951 WITH 1950
Employees	12	14	15	+ 7.14%	637	640	658	+ 2.81%
Trespassers	1	1	-	-100.00%	-	1	1	-
Others	13	26	30	+ 15.38%	25	46	86	+ 86.95%
Patrons or Consumers	13	-	2	-	9	6	2	-66.67%
TOTAL	39	41	47	+ 14.63%	671	693	747	+ 7.79%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
21	Automobile accident		18			1	3			1	21	3.0	4.5
9	Burns - not from electric source	1	9			2				3	9	8.8	1.9
4	Defect or failure of equipment or machinery		5								5		1.1
-	Drowning												
45	Electric - Contact with charged wires or equipment	6	22			16	12			22	34	64.7	7.2
-	Explosion												
-	Failure to use protective devices provided												
150	Falling - (Other than in water)	2	141			1	6			3	147	8.8	31.2
60	Handling materials		60								60		12.7
7	Infection from minor wounds		8								8		1.7
49	Involving use of tools - no defect		49								49		10.4
57	Miscellaneous		58								58		12.3
82	Striking against or struck by objects	3	75			2	5			5	80	14.7	17.0
484	TOTAL	12	445			22	26			34	471		
	Per Cent Killed	35.3				64.7						100.00	
	Per Cent Injured		94.5				5.5						100.00

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1949	11	400	1	-	11	11	-	-	23	411
1950	14	417	-	1	22	17	-	2	36	437
1951	12	445	-	-	22	26	-	-	34	471

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
3	Asphyxiation					3	1			3	1	30.0	0.7
10	Automobile accident		10				5				15		10.8
5	Burns - not from electric source		6								6		4.3
1	Defect or failure of equipment or machinery		1								1		0.7
-	Drowning												
1	Electric - Contact with charged wires or equipment		1								1		0.7
9	Explosion	1	3			4	43	2	1	7	47	70.0	33.9
-	Failure to use protective devices provided												
17	Falling - (Other than in water)		16						1		17		12.2
17	Handling materials		17								17		12.2
-	Infection from minor wounds												
6	Involving use of tools - no defect		6								6		4.3
13	Miscellaneous		13								13		9.4
15	Striking against or struck by objects		15								15		10.8
97	TOTAL	1	88			7	49	2	2	10	139		
	Per Cent Killed	10.0				70.0		20.0				100.0	
	Per Cent Injured		63.3				35.3		1.4				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1949	1	99	-	-	1	11	13	9	15	119
1950	-	93	-	-	3	22	-	4	3	119
1951	1	88	-	-	7	49	2	2	10	139

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
1	Automobile accident		1								1		4.2
1	Burns - not from electric source		1								1		4.2
	Defect or failure of equipment or machines												
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
7	Falling (Other than in water)	1	5				1			1	6	100.0	25.0
5	Handling materials		5								5		20.8
-	Infection from minor wounds												
2	Involving use of tools - no defect		2								2		8.3
4	Miscellaneous		4								4		16.7
5	Striking against or struck by objects		5								5		20.8
25	TOTAL	1	23				1			1	24		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		95.8				4.2						100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1949	-	39	-	-	1	3	-	-	1	42
1950	-	30	-	-	1	-	-	-	1	30
1951	1	23	-	-	-	1	-	-	1	24

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
9	Automobile accident	1	4				4			1	8	50.0	7.2
3	Burns - not from electric source		2				1				3		2.7
1	Defect or failure of equipment or machines		1								1		0.9
-	Drowning												
2	Electric - Contact with charged wires or equipment		1			1	3			1	4	50.0	3.6
-	Explosion												
-	Failure to use protective devices provided												
55	Falling - (Other than in water)		53				2				55		49.6
8	Handling materials		8								8		7.2
-	Infection from minor wounds												
7	Involving use of tools - no defects		7								7		6.3
10	Miscellaneous		9		1						10		9.0
15	Striking against or struck by objects		15								15		13.5
110	TOTAL	1	100	-	1	1	10	-	-	2	111		
	Per Cent Killed	50.0				50.0						100.0	
	Per Cent Injured		90.1		0.9		9.0						100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1949	-	91	-	-	-	-	-	3	-	94
1950	-	92	-	-	-	7	-	-	-	99
1951	1	100	-	1	1	10	-	-	2	111

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
1	Automobile accident		1								1		50.0
	Burns - not from electric source												
	Defect or failure of equipment or machines												
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
	Falling - (Other than in water)												
	Handling materials												
	Infection from minor wounds												
1	Involving use of tools - no defects		1								1		50.0
	Miscellaneous												
	Striking against or struck by objects												
2	TOTAL		2								2		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1949	-	5	-	-	-	-	-	-	-	5
1950	-	8	1	-	-	-	-	-	1	8
1951	-	2	-	-	-	-	-	-	-	2

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1949 and 1950

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1951 WITH 1950	YEAR			COMPARISON OF 1951 WITH 1950	YEAR			COMPARISON OF 1951 WITH 1950
	1949	1950	1951		1949	1950	1951		1949	1950	1951	
Steam Railroad	1897	1890	2134	+ 12.91%	182	137	168	+ 22.62%	1843	1999	2153	+ 7.70%
Street Railway	3379	3159	3377	+ 6.90%	54	50	38	- 24.00%	3993	3713	3935	+ 5.98%
Motor Transportation	1694	1756	1797	+ 2.33%	47	51	35	- 31.37%	2475	2287	2401	+ 4.98%
Electric	425	461	484	+ 4.98%	23	36	34	- 5.55%	411	427	471	+ 10.30%
Gas	123	111	97	- 12.61%	15	3	10	+233.33%	119	119	139	+ 16.80%
Water	39	31	25	- 19.35%	1	1	1	-	42	30	24	- 20.00%
Telephone & Telegraph	94	97	110	+ 13.40%	-	-	2	-	94	99	111	+ 11.21%
Other Utilities	5	9	2	- 77.78%	-	1	-	-100.00%	5	8	2	- 75.00%
TOTAL	7628*	7494*	8006*	+ 6.83%	322	279	288	+ 3.23%	8951*	8659*	9209*	+ 6.35%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals watchmen, etc.	2180	20.16
Protected by trainmen	1471	13.61
Total Protected	3651	33.77
Unprotected (see note)	7161	66.23
TOTAL CROSSINGS	10,812	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	401	10.98
Watchmen	267	7.31
Flashing light signals	1362*	37.31
Other visual signals	35**	0.96
Bells	115	3.15
Trainmen	1471	40.29
TOTAL	3651	100.00

* - Additional protection by short-arm gates at 121 crossings.
**- Includes ten crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	225	66	-	3	2	3	227	74	301	52.81
Protected by gates	23	11	-	6	-	1	23	18	41	7.19
Protected by watchmen	19	-	-	1	-	-	19	1	20	3.51
Protected by bells	7	1	-	1	-	-	7	2	9	1.58
Protected by visual signals	116	34	-	2	1	-	117	36	153	26.84
Protected by trainmen	33	12	-	-	-	1	33	13	46	8.07
Total Accidents at Protected Crossings	198	58	-	10	1	2	199	70	269	47.19
Total Accidents--Non Casualty	423		-		3		426			74.74
Total Accidents--Casualty		126		13		5		144		25.26
TOTAL ACCIDENTS	549		13		8				570	
Per Cent of Total Accidents	96.32		2.28		1.40					100.00

NC - Non Casualty; C - Casualty
* See "Note" Page 16 under Table A

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	28	67	2	1	1	2	31	70	101	48.10
Protected by gates	7	14	3	3	1	-	11	17	28	13.33
Protected by watchmen	-	-	1	-	-	-	1	-	1	.48
Protected by bells	-	2	-	1	-	-	-	3	3	1.43
Protected by visual signals	13	45	2	-	-	-	15	45	60	28.57
Protected by trainmen	3	13	-	-	-	1	3	14	17	8.09
TOTAL	51	141	8	5	2	3	61	149	210	100.00
Killed and Injured at protected crossings	23	74	6	4	1	1	30	79	109	51.90
Per Cent of Total Killed & Injured	91.43		6.19		2.38					100.00

K - Killed; I - Injured
* See "Note" Page 16 under Table A

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1949, 1950 and 1951

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1949	2174	20	41.2	
	1950	2172	18	10.0	
	1951	2180	27		50.0
**UNPROTECTED	1949	8703	24	7.7	
	1950	8682	20	16.7	
	1951	8632	34		70.0
			INJURED		
*PROTECTED	1949	2174	48	44.2	
	1950	2172	53		10.4
	1951	2180	65		22.6
**UNPROTECTED	1949	8703	108		2.9
	1950	8682	104	3.7	
	1951	8632	84	19.2	

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1949	166	- 19.8%	14	- 41.7%	51	- 35.4%
		1950	192	+ 15.7%	12	- 14.3%	49	- 3.9%
		1951	185	- 3.6%	19	+ 58.3%	58	+ 18.3%
	UNPROTECTED**	1949	123	- 25.9%	5	- 44.4%	30	- 18.9%
		1950	136	+ 10.6%	6	+ 20.0%	31	+ 3.3%
		1951	143	+ 5.1%	9	+ 50.0%	27	- 12.9%
RURAL	PROTECTED	1949	53	- 38.4%	6	- 53.8%	40	+ 48.1%
		1950	69	+ 30.2%	6	-	16	- 60.0%
		1951	84	+ 21.7%	11	+ 83.3%	21	+ 31.2%
	UNPROTECTED**	1949	147	- 21.0%	19	+ 35.7%	35	- 27.1%
		1950	153	+ 4.1%	14	- 26.3%	61	+ 74.3%
		1951	158	+ 3.3%	22	+ 57.1%	43	- 29.5%

* - Cities or boroughs with population over 2,500.

** - See "Note" Page 16 under Table A.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1949, 1950 and 1951

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1949	233	26.9	
	1950	254		9.0
	1951	261		2.8
		PERSONS KILLED		
	1949	25	19.3	
	1950	25	-	
	1951	25	-	
		PERSONS INJURED		
	1949	83		10.7
	1950	64	22.9	
	1951	50	21.9	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1949	256	21.4	
	1950	296		15.6
	1951	309		4.4
		PERSONS KILLED		
	1949	19	34.5	
	1950	13	31.6	
	1951	36		176.9
		PERSONS INJURED		
	1949	73	37.1	
	1950	93		27.4
	1951	99		6.4

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	28	4.91	8	13
1 to 1:59 a.m.	18	3.16	4	12
2 to 2:59 a.m.	16	2.81	2	6
3 to 3:59 a.m.	14	2.46	2	6
4 to 4:49 a.m.	12	2.11	-	3
5 to 5:59 a.m.	16	2.81	1	2
6 to 6:59 a.m.	21	3.68	-	1
7 to 7:59 a.m.	24	4.21	3	4
8 to 8:59 a.m.	18	3.16	2	5
9 to 9:59 a.m.	13	2.28	-	1
10 to 10:59 a.m.	21	3.68	-	3
11 to 11:59 a.m.	24	4.21	-	3
Noon to 12:59 p.m.	23	4.04	3	4
1 to 1:59 p.m.	17	2.98	1	8
2 to 2:59 p.m.	24	4.21	3	5
3 to 3:59 p.m.	26	4.56	8	5
4 to 4:59 p.m.	30	5.26	1	6
5 to 5:59 p.m.	30	5.26	3	7
6 to 6:59 p.m.	38	6.67	7	11
7 to 7:59 p.m.	32	5.61	1	6
8 to 8:59 p.m.	29	5.09	3	15
9 to 9:59 p.m.	34	5.96	-	4
10 to 10:59 p.m.	30	5.26	1	8
11 to 11:59 p.m.	31	5.44	8	11
Not Reported	1	.18	-	-
TOTAL	570	100.0	61	149

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	59	10.35	9	32
Monday	100	17.54	8	27
Tuesday	64	11.23	9	6
Wednesday	87	15.26	16	16
Thursday	93	16.32	5	30
Friday	87	15.26	7	15
Saturday	80	14.04	7	23
TOTAL	570	100.00	61	149

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	61	10.70	8	20
February	44	7.72	1	7
March	49	8.60	9	8
April	34	5.96	5	9
May	32	5.61	1	4
June	34	5.96	7	10
July	35	6.14	4	5
August	26	4.56	2	8
September	36	6.32	4	14
October	60	10.53	1	22
November	77	13.51	6	24
December	82	14.39	13	18
TOTAL	570	100.00	61	149

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED 1949, 1950 and 1951

CHARACTER OF TRACK	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1949	449	44	116
	1950	503	38	146
	1951	531	60	139
Public Siding	1949	36	-	39
	1950	39	-	8
	1951	32	-	6
Private Siding	1949	4	-	1
	1950	8	-	3
	1951	7	1	4
Private Grade Crossing (Private Road)	1949	47	9	12
	1950	77	4	23
	1951	92	2	15

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS 1949, 1950 and 1951

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1949	100	31	121
	1950	119	29	149
	1951	127	53	143
Pedestrians	1949	19	12	7
	1950	12	9	3
	1951	13	8	5
Streetcars Autobuses Taxicabs	1949	2	1	25
	1950	3	-	5
	1951	1	-	1
Bicycles Motorcycles Wagons	1949	2	-	3
	1950	-	-	-
	1951	3	2	1

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES 1949, 1950 and 1951

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1949	204	27.4	
	1950	215		5.5
	1951	227		5.6
Protected	1949	162	19.4	
	1950	201		24.1
	1951	199	1.0	

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	3	7	5	.59
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	-
Auto driven through lowered gates and struck by engine or train	4	3	9	1.06
Auto stalled on crossing and struck by engine or train	-	-	10	1.17
Auto struck by engine or train - gates not lowered	-	3	7	.82
Auto struck by engine or train - gates out of order	-	2	4	.47
Auto driven into side of moving train - gates out of order	-	-	2	.23
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	30	67	252	29.54
Auto driven into side of engine or train moving over crossing	12	42	126	14.77
Auto driven into side of engine or train standing on crossing	1	12	19	2.23
Auto stalled on crossing and struck by engine or train	1	6	118	13.83
Total Accidents Involving Contact between Train and Auto	51	142	552	64.71
Auto colliding with crossing gates - No contact with train	-	-	260	30.48
Auto colliding with flashing light signal installations-No contact with trains	-	-	41	4.81
Total Accidents Involving Automobiles at Grade Crossings	51	142	853	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	57	21	19	14	13.69
Passenger train - reverse movement					
Freight train - normal movement	286	87	33	97	65.44
Freight train - reverse movement	1				.17
Freight train - car ahead of engine	3				.53
Switching movement - engine normal ahead of draft	23	12		13	6.14
Switching movement - engine reverse ahead of draft	1				.17
Switching movement - engine pushing cars	11	2	2	2	2.28
Light engine - normal movement	36	19	7	19	9.65
Light engine - reverse movement	5				.88
Motor track cars	3	3		4	1.05
Cars not attached					
TOTAL	426	144	61	149	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1949, 1950 and 1951

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	452	1949	249*	0.550	-	3
	432	1950	300*	0.694	1	10
	401	1951	297*	0.740	7	14
Watch-man	304	1949	39	0.128	-	7
	284	1950	38	0.133	-	8
	267	1951	41	0.153	3	3
Bells	126	1949	9	0.071	1	3
	122	1950	11	0.090	-	-
	115	1951	8	0.069	-	2
Visual Signals	1292	1949	141*	0.109	10	33
	1332	1950	186*	0.139	9	45
	1397	1951	191*	0.137	13	45
Train men	1462	1949	39	0.027	-	18
	1474	1950	50	0.034	-	12
	1471	1951	46	0.031	3	14

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1949	8	-	1
	1950	6	-	2
	1951	8	1	3
Gates out of order	1949	2	-	-
	1950	4	-	1
	1951	4	-	2
Persons passing under or around lowered gates	1949	8	6	2
	1950	4	4	-
	1951	6	3	3
Automobile driven through lowered gates striking or being struck by train	1949	9	-	-
	1950	5	1	-
	1951	14	7	10
Unassigned	1949	7	-	-
	1950	6	-	-
	1951	10	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1949, 1950 and 1951

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1949	218	16.9	
	1950	272		24.7
	1951	260	4.4	
Flashing light signals struck and damaged	1949	33		
	1950	40		17.8
	1951	41		21.2
				2.5

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1942-1951

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1942	55	3	22
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8
1951	27	4	4

TABLE T - CONDITION ON WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	261	89	32	102	61.40
Cloudy	76	28	12	26	18.25
Fog	16	1	1		2.98
Rain	44	13	5	11	10.00
Snow	29	13	11	10	7.37
TOTAL	426	144	61	149	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE
CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	9	10	1	12	3.33
1 - 5	148	25	3	30	30.35
6 - 10	87	23	7	30	19.30
11 - 20	78	35	12	36	19.83
21 - 30	49	25	13	27	12.98
31 - 40	28	15	13	10	7.54
41 - 50	13	5	5	2	3.16
51 - 60	4	3	4	-	1.23
61 - 70	1	2	3	1	.53
Over 70	-	-	-	-	-
Not Reported	9	1	-	1	1.75
TOTAL	426	144	61	149	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE
CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	283	91	35	105	67.15
Wet	63	20	5	23	14.90
Muddy	1				.18
Snowy	22	11	11	7	5.92
Icy	38	6	1	7	7.90
Not Reported	19	3	1	2	3.95
TOTAL	426	131	53	144	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	49	8	30	8.80
21 - 30	97	18	38	17.42
31 - 40	57	11	15	10.23
41 - 50	39	3	18	7.00
51 - 60	25	5	6	4.49
Over 60	18	1	6	3.23
Not Reported	272	7	31	48.83
TOTAL	557	53	144	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED
IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS KILLED	PER CENT OF TOTAL ACCIDENTS
Male	517	48	129	92.82
Female	36	5	15	6.46
Not Reported	4			.72
TOTAL	557	53	144	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE
CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	389	41	111	69.84
Not Familiar	16	1	2	2.87
Not Reported	152	11	31	27.29
TOTAL	557	53	144	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	8			1.40
Allegheny	64	7	17	11.23
Armstrong	3			.53
Beaver	9	2	1	1.58
Bedford	4	1	1	.70
Berks	13	3	1	2.28
Blair	5	4		.88
Bradford	3		6	.53
Bucks	7	4	4	1.23
Butler	9			1.58
Cambria	15		1	2.63
Cameron	2			.35
Carbon	3		1	.53
Centre	5	3	1	.88
Chester	7		2	1.23
Clarion	2			.35
Clearfield	20		4	3.51
Clinton	4	1	1	.70
Columbia	3		1	.53
Crawford	5		6	.88
Cumberland	2			.35
Dauphin	6			1.05
Delaware	10		3	1.75
Elk	2	1	2	.35
Erie	23	4	4	4.03
Fayette	35		9	6.14
Forest	2			.35
Franklin	11		1	1.93
Fulton				
Greene				
Huntingdon	3			.53
Indiana	5			.88
Jefferson	5	2	1	.88
Juniata				

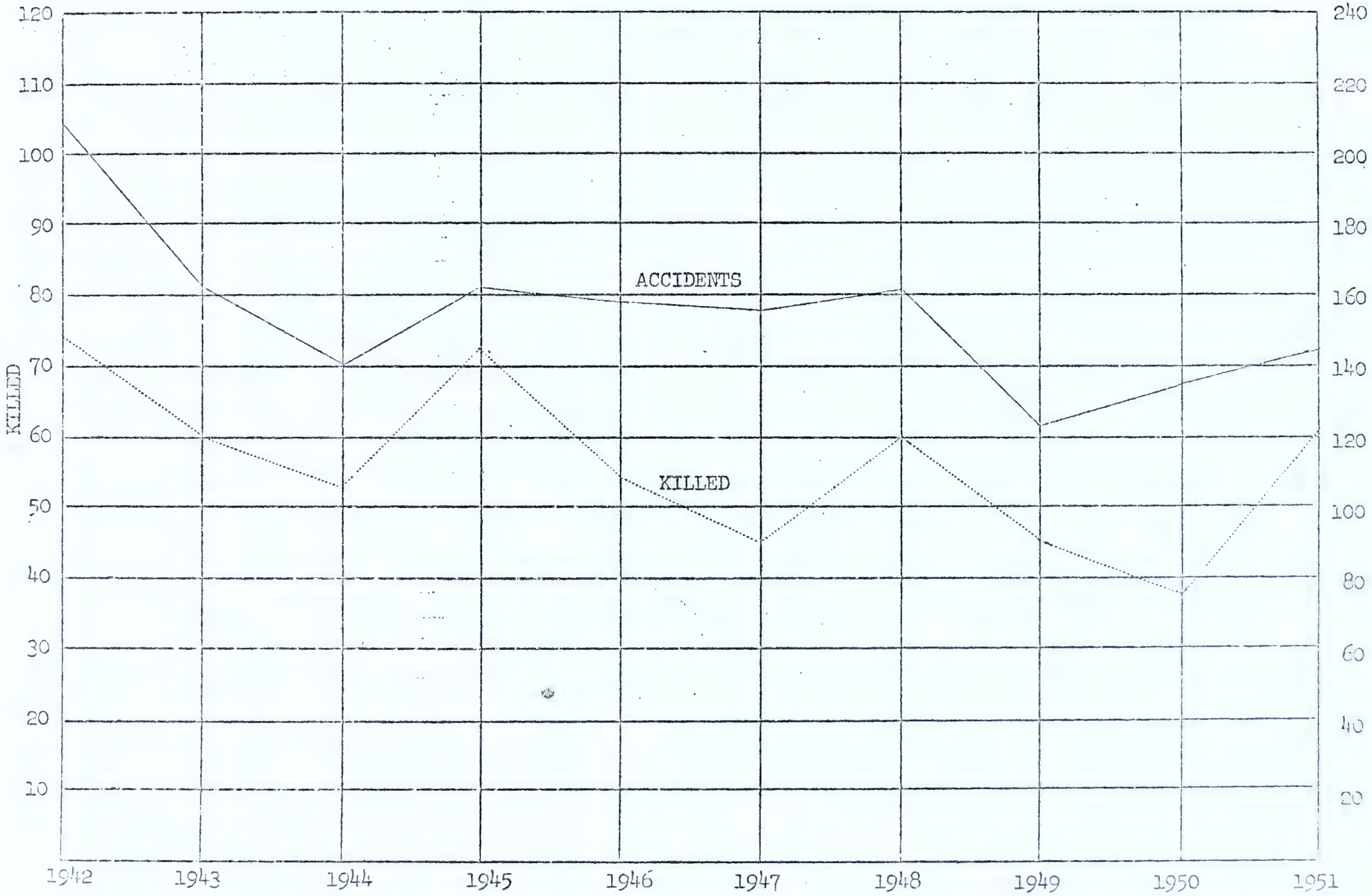
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	9	1	2	1.58
Lancaster	14	4	6	2.46
Lawrence	7		2	1.23
Lebanon	4	2	4	.70
Lehigh	14	1	8	2.46
Luzerne	17		4	2.98
Lycoming	9	3	3	1.58
McKean	12	1	6	2.10
Mercer	13	3	9	2.28
Mifflin	2			.35
Monroe				
Montgomery	17	2	4	2.98
Montour	3		3	.53
Northampton	11		2	1.93
Northumberland	19	4	6	3.33
Perry				
Philadelphia	16	2	5	2.81
Pike	1			.17
Potter				
Schuylkill	7			1.23
Snyder				
Somerset	8	1	1	1.40
Sullivan				
Susquehanna	2			.35
Tioga	6			1.05
Union	3			.53
Venango	4		3	.70
Warren	9	2	2	1.58
Washington	20		5	3.51
Wayne				
Westmoreland	27	2	2	4.73
Wyoming				
York	21	1	5	3.68
TOTAL	570	61	149	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1942 - 1951

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1942	11,214	706	74	224	2,211,324	3.19
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73
1951	10,812	570	61	149	3,338,059	1.71

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSING OVER STEAM RAILROADS IN PENNSYLVANIA 1942 - 1951



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
307	Collision with other vehicle		87		289				2		82				460		66.19
5	Collision with fixed object		2		5										7		1.01
69	Struck by taxicab				5				63				2		70		10.07
143	Running or walking into side of taxicab							1	145					1	145	100.00	20.87
1	Boarding or alighting (Standing vehicle)				1										1		.14
	Falling within vehicle																
3	Caught by vehicle doors				3										3		.43
3	Jumping on or off vehicle in motion				3										3		.43
3	Sudden stop of vehicle				3										3		.43
	Defect or failure of equipment																
	Vehicle skidded																
1	Highway defect				1										1		.14
	Apparent reckless operating of vehicle																
2	Miscellaneous				2										2		.29
537	TOTAL	-	89	-	312	-	-	1	210	-	82	-	2	1	695		
	Per Cent Killed							100.00								100.00	
	Per Cent Injured		12.80		44.89				30.22		11.80		.29				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
345	Collision with other vehicle		26	3	370				3	6	287		2	9	688	75.00	42.92
19	Collision with fixed object		3		73										76		4.74
75	Struck by autobus				1			1	69			1	6	2	76	16.67	4.74
41	Running or walking into side of autobus				1			1	40					1	41	8.33	2.56
276	Boarding or alighting (Standing vehicle)		2		275										277		17.28
105	Falling within vehicle				106										106		6.61
69	Caught by vehicle doors				69										69		4.30
3	Jumping on or off vehicle in motion		2		5		1								8		.50
161	Sudden stop of vehicle				169										169		10.54
18	Defect or failure of equipment		4		14						1				19		1.19
7	Vehicle skidded				10				4		2				16		1.00
8	Highway defect		5		3										8		.50
	Apparent reckless operation of vehicle																
46	Miscellaneous		11		38				1						50		3.12
1173	TOTAL	-	53	3	1134	-	1	2	117	6	290	1	8	12	1603		
	Per Cent Killed	-		25.00				16.67		50.0		8.33				100.00	
	Per Cent Injured		3.31		70.74		.06		7.30		18.09		.50				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
3	Collision with other vehicle		2		2						4				8		80.0
	Collision with fixed object																
	Struck by autobus																
	Running or walking into side of autobus																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
1	Caught by vehicle doors				1										1		10.0
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment										1				1		10.0
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
	Miscellaneous																
5	TOTAL	-	2	-	3	-	-	-	-	-	5	-	-	-	10		
	Per Cent Killed	-		-		-		-		-		-		-		-	
	Per Cent Injured		20.0		30.0						50.0						100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
52	Collision with other vehicles	6	12		7					8	48			14	67	77.78	79.77
5	Collision with fixed object		6									1		1	6	5.55	7.14
9	Struck by truck							1	6			2		3	6	16.67	7.14
	Running or walking into side of truck																
1	Boarding or alighting (Standing Vehicle)		1												1		1.19
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
2	Defect or failure of equipment		1						1						2		2.38
	Vehicle skidded																
	Highway defect																
1	Apparent reckless operation of vehicle		1												1		1.19
1	Miscellaneous		1												1		1.19
71	TOTAL	6	22	-	7	-	-	1	7	8	48	3	-	18	84		
	Per Cent Killed	33.3						5.6		44.4		16.7				100.00	
	Per Cent Injured		26.2		8.3				8.3		57.2						100.00

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
7	Collision with other vehicle		1							3	5			3	6	75.0	66.7
	Collision with fixed object																
1	Struck by taxicab, autobus or truck		1												1		11.1
1	Running or walking into side of taxicab, autobus or truck								1						1		11.1
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment		1												1		11.1
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
1	Miscellaneous	1												1		25.0	
11	TOTAL	1	3	-	-	-	-	-	1	3	5	-	-	4	9		
	Per Cent Killed	25.0								75.0						100.0	
	Per Cent Injured		33.3						11.1		55.6						100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1949	-	79	-	402	-	-	2	96	1	212	-	-	3	789
1950	1	105	3	319	-	-	1	201	3	121	-	2	8	748
1951	-	89	-	312	-	-	1	210	-	82	-	2	1	695

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1949	-	35	3	1140	-	-	12	96	14	271	2	13	31	1555
1950	-	52	2	1004	-	2	10	108	11	215	-	11	23	1392
1951	-	53	3	1134	-	1	2	117	6	290	1	8	12	1603

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1949	-	-	-	5	-	-	-	-	-	6	-	-	-	11
1950	-	-	-	7	-	-	-	-	-	1	-	-	-	8
1951	-	2	-	3	-	-	-	-	-	5	-	-	-	10

K - Killed; I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1949	-	29	-	8	-	-	5	12	5	47	-	-	10	96
1950	3	18	-	14	-	-	2	7	13	56	-	-	18	95
1951	6	22	-	7	-	-	1	7	8	48	3	-	18	84

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1949	1	5	-	1	-	-	-	4	2	13	-	1	3	24
1950	-	7	-	6	-	-	1	1	1	28	-	2	2	44
1951	1	3	-	-	-	-	-	1	3	5	-	-	4	9

K - Killed; I - Injured

PENNSYLVANIA PUBLIC UTILITY COMMISSION

1952

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
July 27, 1953

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1952

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
July 27, 1953

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors Isenberg and Johnson

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1952.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1952 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	61	Canal	1
Street Railways	10	Electric	35
Ferries	18	Gas (Artificial)	36
Motorboats	10	Gas (Natural)	63
Steamboats	2	Pipe Lines	5
Express	1	Sewerage	18
Bus - Scheduled Service	463	Steam Heat	22
Bus - Group and Party	305	Telegraph	2
Taxi - Call and Demand	732	Telephone	143
Truck - Common Carrier	6783	Water	490
Airways	67	Wharfage	3
Incline Plane	3	Stock Yards	3

Total Transportation Utilities	8,455
Total Service Utilities	821
Total	9,276

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 627 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $250 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1952 there was a decrease in casualty accidents involving all transportation utilities and also in accidents involving service utilities. The summary which includes all utilities indicates that the total number of accidents decreased 9.53% during the year and that the number of fatalities was reduced 12.50% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1853	146	1851	25.52	57.94	21.53
Street Railway	3054	43	3653	42.06	17.06	42.49
Motor Transportation	1751	30	2487	24.12	11.91	28.93
Electric	387	22	379	5.33	8.73	4.41
Gas	92	10	101	1.27	3.96	1.17
Water	23	1	22	.32	.40	.26
Telephone & Telegraph	97	-	100	1.33	-	1.16
Other Utilities	4	-	4	.05	-	.05
TOTAL	7233*	252	8562*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	33	1442	4	116	3	161	4	353	1	82	1	22	-	89	-	4	46	2269	18.25	26.39
Trespasser	55	29	5	13	-	-	1	-	-	-	-	-	-	-	-	-	61	42	24.21	.49
Other	5	76	-	30	-	22	17	25	8	15	-	-	-	10	-	-	30	178	11.90	2.07
Passenger, Patron or Consumer	5	125	7	2277	6	1579	-	1	1	4	-	-	-	1	-	-	19	3987	7.54	46.38
Pedestrian	4	7	14	260	5	269	-	-	-	-	-	-	-	-	-	-	23	536	9.13	6.23
Occupant Other Vehicle	44	172	13	957	16	456	-	-	-	-	-	-	-	-	-	-	73	1585	28.97	18.44
TOTAL	146	1851	43	3653	30	2487	22	379	10	101	1	22	-	100	-	4	252	8562*		
Per Cent Killed	57.94		17.06		11.91		8.73		3.96		.40		-		-				100.00	
Per Cent Injured		21.53		42.49		28.93		4.41		1.17		.26		1.16		.05				100.00

K- Killed; I - Injured

* -Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
140	Grade Crossings (for details-see appendix)	-	10	-	3	-	-	48	179	48	192	32.88	10.37
20	Collisions	3	26	-	1	-	-	-	-	3	27	2.06	1.46
8	Derailments	-	13	-	-	-	-	-	-	-	13		.70
58	At station or loading platform	-	5	-	13	-	-	-	40	-	58		3.13
20	Defect or failure of roadway or equipment	-	19	-	2	-	-	-	-	-	21		1.13
70	Operating switches	-	70	-	-	-	-	-	-	-	70		3.78
36	Struck overhead or side obstruction	1	34	-	-	-	-	-	1	1	35	.68	1.89
84	Repairing track or roadbed	5	80	-	-	-	-	-	-	5	80	3.42	4.32
63	Struck by flying missile, glass, etc.	-	52	-	10	-	-	-	3	-	65		3.51
84	Coupling or uncoupling	1	84	-	-	-	-	-	-	1	84	.68	4.54
52	Falling on locomotive or car	-	40	-	11	-	-	-	1	-	52		2.81
176	Falling from locomotive or car	1	172	1	3	1	1	-	2	3	178	2.06	9.62
314	Getting on or off locomotive or car	1	250	1	55	1	7	-	-	3	312	2.06	16.86
123	Struck by locomotive or car	15	30	-	-	53	19	4	2	72	51	49.32	2.75
90	Operating hand brakes	1	89	-	-	-	-	-	-	1	89	.68	4.81
171	Sudden starting or stopping of trains	-	157	-	16	-	-	-	15	-	188		10.16
3	Coming in contact with catenary wire	1	1	-	-	-	1	-	-	1	2	.68	.11
29	On or about locomotive	-	29	-	-	-	-	-	-	-	29		1.57
312	Miscellaneous	4	281	3	11	-	1	1	12	8	305	5.48	16.48
1853	TOTAL	33	1442	5	125	55	29	53	255	146	1851		
	Per Cent Killed	22.61		3.42		37.67		36.30				100.00	
	Per Cent Injured		77.90		6.75		1.57		13.78				100.00

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K- Killed; I - Injured

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $250 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	31			+ 6.89
YARD TRACK	242	273	22.27	- 0.41
DERAILMENTS:				
MAIN TRACK	318			- 15.87
YARD TRACK	341	659	53.75	- 20.51
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		263	21.45	+ 10.50
MISCELLANEOUS		31	2.53	- 20.51
TOTAL		1226	100.00	- 9.59

Note: 491 of the 659 Derailments (74.51%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $250 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1950	1290	+ 16.01	3,612,054	+ 20.50
1951	1356	+ 5.11	4,331,343	+ 19.91
1952	1226	- 9.59	3,723,931	- 14.01

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE *	INJURED			% INCREASE OR DECREASE *
	1950	1951	1952		1950	1951	1952	
EMPLOYEES	29	25	33	+ 32.00	1422	1681	1442	- 14.22
PASSENGERS	-	9	5	- 44.44	253	177	125	- 29.38
TRESPASSERS	66	69	55	- 20.29	56	48	29	- 39.58
OTHERS **	42	65	53	- 18.42	268	247	255	+ 3.23
TOTALS	137	168	146	- 13.10	1999	2153	1851	- 14.03

* Comparison of 1952 with 1951
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	3	25	9.09	1.73
Road Firemen	1	41	3.03	2.84
Road Conductors	2	92	6.06	6.38
Road Brakemen	2	178	6.06	12.34
Road Flagmen	-	23	-	1.60
Road Baggagemen	-	6	-	.42
Yard Enginemen and Firemen	1	70	3.03	4.85
Yard Brakemen and Conductors	12	748	36.37	51.87
Yard Switch Tenders	-	6	-	.42
Crossing Watchmen	-	4	-	.28
Track Walkers	1	1	3.03	.07
Sectionmen and Work Train Laborers	6	97	18.18	6.73
Signalmen and Signal Maintainers	1	6	3.03	.42
Station Baggagemen	-	3	-	.21
Car Cleaners	-	6	-	.42
Car Inspectors	1	11	3.03	.76
Car Repairmen	-	7	-	.48
Carpenters	-	9	-	.62
Dining Car Employees	-	49	-	3.40
Miscellaneous	2	40	6.06	2.77
Employees Not on Duty	1	20	3.03	1.39
TOTAL	33	1442	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		1	3.57		8	19.05		2	2.13	1	33	18.89
31 - 40		1	3.57		16	38.10		19	20.21	1	50	28.33
41 - 50	1	4	17.86		4	9.52		11	11.70		38	21.11
51 - 60		8	28.57		5	11.90	2	29	32.98		38	21.11
61								3	3.19			
62	1	2	10.71					3	3.19		4	2.22
63								2	2.13		2	1.11
64								6	6.38		1	.56
65								2	2.13		1	.56
Over 65		6	21.43					7	7.45		3	1.67
Not Reported	1	3	14.29	1	8	21.43		8	8.51		8	4.44
TOTAL	3	25	100.00	1	41	100.00	2	92	100.00	2	173	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21								3	[illegible]		[illegible]	.26
21 - 30		1	4.35		14	19.72	2	236	31.32	3	[illegible]	[illegible].87
31 - 40		3	13.04		19	26.76	1	202	[illegible]	2	[illegible]	[illegible]4
41 - 50		2	8.70		13	18.31	2	82	[illegible]	3	[illegible]	[illegible]11
51 - 60		5	21.73		12	16.90	5	108	14.87	7	205	17.70
61		1	4.35		1	1.41	1	6	.92	1	11	1.00
62		1	4.35					7	.92	1	17	1.50
63		2	8.70		1	1.41		8	1.05	-	15	1.25
64		1	4.35		2	2.82		8	1.05	-	18	1.50
65					1	1.41		8	1.05	-	12	1.00
Over 65					1	1.41		9	1.19	-	26	2.17
Not Reported		7	30.43	1	6	9.85	1	71	9.47	4	111	9.60
TOTAL		23	100.00	1	70	100.00	12	748	100.00	21	1177	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

No. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
31	Collision of cars	1	9		116									1	125	2.33	3.42
915	Collision of car and vehicle		18		388			13	952		7		20	13	1385	30.23	37.91
276	Struck by car	3	4	5	10	5	1			14	240		5	27	260	62.78	7.12
15	Derailment of car				28				4						32		.88
2	Contact with overhead or side obst.				8										8		.22
-	Contact with trolley or feed wire or third rail																
19	Sudden stop		1		23										24		.66
71	Defect or failure of roadway or eqp.		2		71				1		5		1		80		2.19
204	Caught by doors		1		207										208		5.69
123	Boarding standing car		1		122										123		3.37
374	Alighting from car		5		370										375		10.27
546	Falling within car		1	1	547									1	548	2.33	15.00
10	Jumping on or off car while in motion						12								12		.33
286	At elevated or subway platforms			1	283						1		2	1	286	2.33	7.83
36	Repair work on right of way		36												36		.98
36	Struck by flying missile, glass, etc.		7		32										39		[illegible]
110	Miscellaneous		31		72						7		2		112		3.06
3054	TOTAL	4	116	7	2277	5	13	13	957	14	260		30	43	3653		
	Per Cent Killed	9.30		16.28		11.63		30.23		32.56						100.00	
	Per Cent Injured		3.18		62.33		0.35		26.20		7.12		0.82				100.00

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1952 WITH 1951	YEAR			COMPARISON OF 1952 WITH 1951
	1950	1951	1952		1950	1951	1952	
Employees		1	4	+ 300.00%	163	155	116	- 25.16%
Passengers	4	5	7	+ 40.00%	2317	2461	2277	- 7.48%
Trespassers	3	2	5	+ 150.00%	24	15	13	- 13.33%
Occupants of other vehicles	12	14	13	- 7.14%	857	964	957	- 0.73%
Pedestrians	29	16	14	- 12.50%	323	301	260	- 13.62%
Others	2				29	39	30	- 23.07%
TOTAL	50	38	43	+ 13.15%	3713	3935	3653	- 7.16%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
785	Collision with other vehicle	1	136	6	815			1		16	455		1	24	1407	80.00	56.57
27	Collision with fixed object		4		90						1		1		96		3.86
120	Struck by auto-bus, taxicab or truck				1			3	100				19	3	120	10.00	4.83
171	Running or walking into side of auto-bus, taxicab or truck				4			1	168					1	172	3.33	6.92
243	Boarding or alighting (standing vehicle)		1		242										243		9.77
122	Falling within vehicle				122										122		4.91
65	Caught by vehicle doors				65										65		2.61
4	Jumping on or off vehicle in motion		1		3										4		.16
123	Sudden stop of vehicle				133										133		5.35
22	Defect or failure of equipment				22										22		.88
8	Vehicle skidded		1		40										41		1.65
1	Highway defect		1												1		.04
-	Apparent reckless operation of vehicle																
60	Miscellaneous	2	17		42				1				1	2	61	6.67	2.45
1751	TOTAL	3	161	6	1579	-	-	5	269	16	456	-	22	30	2487		
	Per Cent Killed	10.00		20.00		-		16.67		53.33		-				100.00	
	Per Cent Injured		6.47		63.49		-		10.82		18.34		0.88				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	732	570	3	[illegible]	243	$162,722.73
Schedule Route (Bus Service)	463	1098	13	1545	318	271,918.25
Group and Party (Bus Service)	305	9		12	4	1,835.00
Freight & Merchandise (Truck)	6783	53	12	65	64	75,006.70
Contract Carrier (Persons and Property)	627	21	2	24	19	21,378.30
TOTAL	8910	1751	30	2487	618	$532,860.98

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

		CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
YEAR	NUMBER OF REGULATED OPERATORS	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1950	9,939	2,578	- 8.58%	51	+ 8.51%	2,287	- 7.59%	688,104.85	+ 19.07%
1951	9,504	2,566	- 0.47%	35	- 31.37%	2,401	+ 4.98%	652,196.85	- 5.22%
1952	8,910	2,369	- 7.67%	30	- 14.28%	2,487	+ 3.58%	532,860.98	- 18.30%

Note: Only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation		2								2		0.3
29	Automobile accident		20			1	10			1	30	3.0	5.0
17	Burns - not from electric source		16				5				21		3.5
1	Defect or failure of equipment or machines		1								1		0.1
-	Drowning												
41	Electric - Contact with charged wires or equipment	4	9	1		16	18		1	21	28	63.7	4.6
10	Explosion		4			8	10	1	4	9	18	27.3	3.0
1	Failure to use protective devices provided		1								1		0.1
166	Falling - (Other than in water)	1	163				3		1	1	167	3.0	27.6
67	Handling materials		67								67		11.1
10	Infection from minor wounds		10								10		1.7
53	Involving use of tools - no defect		53								53		8.7
74	Miscellaneous	1	73							1	73	3.0	[illegible]
133	Striking against or struck by object		131				4				135		22.3
603	TOTAL	6	550	1	-	25	50	1	6	33	606		
	Per Cent Killed	18.2		3.0		75.8		3.0				100.0	
	Per Cent Injured		90.8				8.3		0.9				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1950	1951	1952	COMPARISON OF 1952 WITH 1951	1950	1951	1952	COMPARISON OF 1952 WITH 1951
Employees	14	15	6	- 60.00%	640	658	550	- 16.41%
Trespassers	1		1	-	1	1		- 100.00%
Others	26	30	25	- 16.67%	46	86	50	- 41.86%
Patrons or Consumers		2	1	- 50.00%	6	2	6	+ 200.00%
TOTAL	41	47	33	- 29.79%	693	747	606	- 18.87%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
13	Automobile accident		11			1	3			1	14	4.6	3.7
6	Burns - not from electric source		7								7		1.8
-	Defect or failure of equipment or machinery												
-	Drowning												
41	Electric - Contact with charged wires or equipment	4	9	1		16	18		1	21	28	95.4	7.4
2	Explosion		3								3		0.8
1	Failure to use protective devices provided		1								1		0.3
99	Falling - (Other than in water)		97				2				99		26.1
45	Handling materials		45								45		11.9
8	Infection from minor wounds		8								8		2.1
38	Involving use of tools - no defect		38								38		10.0
49	Miscellaneous		49								49		12.9
85	Striking against or struck by objects		85				2				87		23.0
387	TOTAL	4	353	1		17	25		1	22	379		
	Per Cent Killed	18.2		4.5		77.3						100.0	
	Per Cent Injured		93.1				6.6		0.3				100.0

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1950	14	417	-	1	22	17	-	2	36	437
1951	12	445	-	-	22	26	-	-	34	471
1952	4	353	1	-	17	25	-	1	22	379

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
4	Automobile accident		4								4		4.0
9	Burns - not from electric source		7				5				12		11.9
1	Defect or failure of equipment or machinery		1								1		1.0
-	Drowning												
-	Electric - Contact with charged wires or equipment												
8	Explosion		1			8	10	1	4	9	15	90.0	14.9
-	Failure to use protective devices provided												
17	Falling - (Other than in water)	1	16							1	16	10.0	15.8
14	Handling materials		14								14		13.9
-	Infection from minor wounds												
10	Involving use of tools - no defect		10								10		9.9
13	Miscellaneous		13								13		12.8
16	Striking against or struck by objects		16								16		15.8
92	TOTAL	1	82	-	-	8	15	1	4	10	101		
	Per Cent Killed	10.0				80.0		10.0				100.0	
	Per Cent Injured		81.1				14.9		4.0				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1950	-	93	-	-	3	22	-	4	3	119
1951	1	88	-	-	7	49	2	2	10	139
1952	1	82	-	-	8	15	1	4	10	101

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
	Automobile accident												
1	Burns - not from electric source		1								1		4.6
-	Defect or failure of equipment or machines												
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
6	Falling (Other than in water)		6								6		27.3
3	Handling materials		3								3		13.6
-	Infection from minor wounds												
1	Involving use of tools - no defect		1								1		4.5
3	Miscellaneous	1	2							1	2	100.0	9.1
9	Striking against or struck by objects		9								9		40.9
23	TOTAL	1	22	-	-	-	-	-	-	1	22		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1950	-	30	-	-	1	-	-	-	1	30
1951	1	23	-	-	-	1	-	-	1	24
1952	1	22	-	-	-	-	-	-	1	22

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation		2								2		2.0
12	Automobile accident		5				7				12		12.0
	Burns - not from electric source												
	Defect or failure of equipment or machines												
-	Drowning												
	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
43	Falling - (Other than in water)		43				1		1		45		45.0
5	Handling materials		5								5		5.0
2	Infection from minor wounds		2								2		2.0
4	Involving use of tools - no defects		4								4		4.0
9	Miscellaneous		9								9		9.0
21	Striking against or struck by objects		19				2				21		21.0
97	TOTAL	-	89	-	-	-	10	-	1	-	100		
	Per Cent Killed												
	Per Cent Injured		89.0				10.0		1.0				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1950	-	92	-	-	-	7	-	-	-	99
1951	1	100	-	1	1	10	-	-	2	111
1952	-	89	-	-	-	10	-	1	-	100

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
	Automobile accident												
1	Burns - not from electric source		1								1		25.0
	Defect or failure of equipment or machines												
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
1	Falling - (Other than in water)		1								1		25.0
	Handling materials												
	Infection from minor wounds												
	Involving use of tools - no defects												
	Miscellaneous												
2	Striking against or struck by objects		2								2		50.0
4	TOTAL		4								4		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1950	-	8	1	-	-	-	-	-	1	8
1951	-	2	-	-	-	-	-	-	-	2
1952	-	4	-	-	-	-	-	-	-	4

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1950 and 1951

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1952 WITH 1951	YEAR			COMPARISON OF 1952 WITH 1951	YEAR			COMPARISON OF 1952 WITH 1951
	1950	1951	1952		1950	1951	1952		1950	1951	1952	
Steam Railroad	1890	2134	1853	- 13.16%	137	168	146	- 13.09%	1999	2153	1851	- 14.02%
Street Railway	3159	3377	3054	- 9.56%	50	38	43	+ 13.16%	3713	3935	3653	- 7.16%
Motor Transportation	1756	1797	1751	- 2.56%	51	35	30	- 14.28%	2287	2401	2487	+ 3.58%
Electric	461	484	387	- 20.04%	36	34	22	- 35.29%	427	471	379	- 19.53%
Gas	111	97	92	- 5.15%	3	10	10	-	119	139	101	- 27.34%
Water	31	25	23	- 8.00%	1	1	1	-	30	24	22	- 8.33%
Telephone & Telegraph	97	110	97	- 11.82%	-	2	-	-100.00%	99	111	100	- 9.91%
Other Utilities	9	2	4	+100.00%	1	-	-	-	8	2	4	+100.00%
TOTAL	7494*	8006*	7233*	- 9.66%	279	288	252	- 12.50%	8659*	9209*	8562*	- 7.03%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX
DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals watchmen, etc.	2176	20.20
Protected by trainmen	1506	13.98
Total Protected	3682	34.18
Unprotected (see note)	7091	65.82
TOTAL CROSSINGS	10,773	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	375	10.18
Watchmen	262	7.12
Flashing light signals	1392*	37.81
Other visual signals	34**	0.92
Bells	113	3.07
Trainmen	1506	40.90
TOTAL	3682	100.00

* - Additional protection by short-arm gates at 143 crossings.
**- Includes ten crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	203	58		2	3	2	206	62	268	55.26
Protected by gates	17	7		5			17	12	29	5.98
Protected by watchmen	12	5		1			12	6	18	3.71
Protected by bells	6						6		6	1.24
Protected by visual signals	91	35		3	3	1	94	39	133	27.42
Protected by trainmen	27	3			1		28	3	31	6.39
Total Accidents at Protected Crossings	153	50	-	9	4	1	157	60	217	44.74
Total Accidents--Non Casualty	356		-		7		363			74.85
Total Accidents--Casualty		108		11		3		122		25.15
TOTAL ACCIDENTS	464		11		10				485	
Per Cent of Total Accidents	95.68		2.26		2.06					100.00

NC - Non Casualty; C - Casualty

* See "Note" Page 16 under Table A

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	13	67	-	2	4	45	17	114	131	60.65
Protected by gates		9	2	3	-	-	2	12	14	6.48
Protected by watchmen	1	7		1	-	-	1	8	9	4.17
Protected by bells	-	-	-	-	-	-	-	-	-	
Protected by visual signals	17	38	2	1	1	-	20	39	59	27.31
Protected by trainmen	-	3	-	-	-	-	-	3	3	1.39
TOTAL	31	124	4	7	5	45	40	176	216	100.00
Killed and Injured at protected crossings	18	57	4	5	1	-	23	62	85	39.35
Per Cent of Total Killed & Injured	71.76		5.09		23.15					100.00

K - Killed; I - Injured

* See "Note" Page 16 under Table A

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1950, 1951 and 1952

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR Decrease	Increase
*PROTECTED	1950	2172	18	10.0	
	1951	2180	27		50.0
	1952	2176	23	14.8	
**UNPROTECTED	1950	8682	20	16.7	
	1951	8632	34		70.0
	1952	8597	17	50.0	
			INJURED		
*PROTECTED	1950	2172	53		10.4
	1951	2180	65		22.6
	1952	2176	59	9.2	
**UNPROTECTED	1950	8682	104	3.7	
	1951	8632	84	19.2	
	1952	8597	117		39.2

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1950	192	+ 15.7%	12	- 14.3%	49	- 3.9%
		1951	185	- 3.6%	19	+ 58.3%	58	- 18.3%
		1952	161	- 13.0%	13	- 31.6%	44	- 24.1%
	UNPROTECTED**	1950	136	+ 10.6%	6	+ 20.0%	31	+ 3.3%
		1951	143	+ 5.1%	9	+ 50.0%	27	- 12.9%
		1952	139	- 2.8%	5	- 44.4%	36	+ 33.3%
RURAL	PROTECTED	1950	69	+ 30.2%	6		16	- 60.0%
		1951	84	+ 21.7%	11	+ 83.3%	21	+ 31.2%
		1952	56	- 33.3%	10	- 9.1%	18	- 14.3%
	UNPROTECTED**	1950	153	+ 4.1%	14	- 26.3%	61	+ 74.3%
		1951	158	+ 3.3%	22	+ 57.1%	43	- 29.5%
		1952	129	- 18.4%	12	- 45.5%	78	+ 81.4%

* - Cities or boroughs with population over 2,500.

** - See "Note" Page 16 under Table A.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1949, 1950 and 1951

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1950	254		9.0
	1951	261		2.8
	1952	244	6.5	
		PERSONS KILLED		
	1950	25	-	-
	1951	25	-	-
	1952	29		16.0
		PERSONS INJURED		
	1950	64	22.9	
	1951	50	21.9	
	1952	104		108.0
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1950	296		15.6
	1951	309		4.4
	1952	241	22.0	
		PERSONS KILLED		
	1950	13	31.6	
	1951	36		176.9
	1952	11	69.4	
		PERSONS INJURED		
	1950	93		27.4
	1951	99		6.4
	1952	72	27.3	

TABLE H
HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	17	3.52	1	5
1 to 1:59 a.m.	13	2.68	-	4
2 to 2:59 a.m.	16	3.30	1	3
3 to 3:59 a.m.	13	2.68	-	5
4 to 4:59 a.m.	12	2.47	-	2
5 to 5:59 a.m.	11	2.27	-	-
6 to 6:59 a.m.	21	4.33	5	3
7 to 7:59 a.m.	21	4.33	2	16
8 to 8:59 a.m.	18	3.71	5	4
9 to 9:59 a.m.	26	5.36	2	3
10 to 10:59 a.m.	18	3.71	2	6
11 to 11:59 a.m.	15	3.09	1	2
Noon to 12:59 p.m.	23	4.74	3	4
1 to 1:59 p.m.	21	4.33	2	5
2 to 2:59 p.m.	17	3.51	2	3
3 to 3:59 p.m.	15	3.09	1	3
4 to 4:59 p.m.	35	7.22	1	5
5 to 5:59 p.m.	15	3.09	-	6
6 to 6:59 p.m.	21	4.33	1	8
7 to 7:59 p.m.	33	6.80	5	53
8 to 8:59 p.m.	26	5.36	-	10
9 to 9:59 p.m.	27	5.57	3	8
10 to 10:59 p.m.	25	5.15	2	13
11 to 11:59 p.m.	26	5.36	1	5
Not Reported	-	-	-	-
TOTAL	485	100.00	40	176

TABLE I
DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	56	11.55	5	22
Monday	71	14.64	7	20
Tuesday	68	14.02	3	23
Wednesday	71	14.64	12	63
Thursday	73	15.05	4	19
Friday	76	15.67	4	9
Saturday	70	14.43	5	20
TOTAL	485	100.00	40	176

TABLE J
MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	63	12.99	9	12
February	52	10.72	-	14
March	45	9.28	5	11
April	37	7.63	1	12
May	30	6.18	2	9
June	27	5.57	5	6
July	19	3.92	3	4
August	34	7.01	2	9
September	34	7.01	5	57
October	39	8.04	2	12
November	60	12.37	5	17
December	45	9.28	1	13
TOTAL	485	100.00	40	176

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED 1950, 1951 and 1952

CHARACTER OF TRACK	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1950	503	38	146
	1951	531	60	139
	1952	457	39	171
Public Siding	1950	39	-	8
	1951	32	-	6
	1952	20	1	4
Private Siding	1950	8	-	3
	1951	7	1	4
	1952	8	-	1
Private Grade Crossing (Private Road)	1950	77	4	23
	1951	92	2	15
	1952	54	8	16

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS 1950, 1951 and 1952

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1950	119	29	149
	1951	127	53	143
	1952	108	31	124
Pedestrians	1950	12	9	3
	1951	13	8	5
	1952	11	4	7
Streetcars	1950	3	-	5
Autobuses	1951	1	-	1
Taxicabs	1952	2	4	45
Bicycles	1950	-	-	-
Motorcycles	1951	3	2	1
Wagons	1952	1	1	-

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES 1950, 1951 and 1952

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1950	215		
	1951	227		5.5
	1952	206	9.3	5.6
Protected	1950	201		
	1951	199	1.0	24.1
	1952	157	21.1	

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	1	4	.52
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	-
Auto driven through lowered gates and struck by engine or train	-	1	4	.52
Auto stalled on crossing and struck by engine or train	-	-	8	1.04
Auto struck by engine or train - gates not lowered	-	7	9	1.17
Auto struck by engine or train - gates out of order	-	2	2	.26
Auto driven into side of moving train - gates out of order	-	1	1	.13
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	25	112	232	30.25
Auto driven into side of engine or train moving over crossing	3	24	117	15.26
Auto driven into side of engine or train standing on crossing	2	6	17	2.22
Auto stalled on crossing and struck by engine or train	5	15	76	9.91
Total Accidents Involving Contact between Train and Auto	35	169	470	61.28
Auto colliding with crossing gates - No contact with train	-	3	260	33.9[illegible]
Auto colliding with flashing light signal installations-No contact with trains	-	-	37	4.82
Total Accidents Involving Automobiles at Grade Crossings	35	172	767	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	47	27	13	31	15.26
Passenger train - reverse movement	-	-	-	-	
Freight train - normal movement	247	73	23	119	65.28
Freight train - reverse movement	-	1	-	2	.21
Freight train - car ahead of engine	4	1	-	1	1.03
Switching movement - engine normal ahead of draft	13	4	2	2	3.51
Switching movement - engine reverse ahead of draft	-	-	-	-	
Switching movement - engine pushing cars	7	-	-	-	1.44
Light engine - normal movement	39	13	2	15	10.72
Light engine - reverse movement	3	1		1	.82
Motor track cars	3	2		2	1.03
Cars not attached					
TOTAL	363	122	40	176	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1950, 1951 and 1952

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	432	1950	300*	0.694	1	10
	401	1951	297*	0.740	7	14
	375	1952	289*	0.771	-	17
Watch-man	284	1950	38	0.133	-	8
	267	1951	41	0.153	3	3
	262	1952	32	0.122	1	10
Bells	122	1950	11	0.090	-	-
	115	1951	8	0.069	-	2
	113	1952	6	0.053	-	-
Visual Signals	1332	1950	186*	0.139	9	45
	1397	1951	191*	0.137	13	45
	1426	1952	165*	0.116	17	38
Train-men	1474	1950	50	0.034	-	12
	1471	1951	46	0.031	3	14
	1506	1952	31	0.021	-	3

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1950	6	-	2
	1951	8	1	3
	1952	9	-	7
Gates out of order	1950	4	-	1
	1951	4	-	2
	1952	2	-	2
Persons passing under or around lowered gates	1950	4	4	-
	1951	6	3	3
	1952	4	2	2
Automobile driven through lowered gates striking or being struck by train	1950	5	1	-
	1951	14	7	10
	1952	6	-	1
Unassigned	1950	6	-	-
	1951	10	-	-
	1952	8	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1950, 1951 and 1952

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1950	272		
	1951	260	4.4	
	1952	260	-	-
Flashing light signals struck and damaged	1950	40		
	1951	41		2.5
	1952	37	9.8	

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1943-1952

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1943	34	1	12
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8
1951	27	4	4
1952	20	-	8

TABLE T - CONDITION ON WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	211	87	30	100	61.44
Cloudy	64	16	4	14	16.49
Fog	16	6	5	49	4.54
Rain	50	9	1	9	12.16
Snow	22	4	-	4	5.37
TOTAL	363	122	40	176	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	13	4	2	6	3.51
1 - 5	115	21	-	21	28.04
6 - 10	80	14	1	17	19.38
11 - 20	72	33	12	82	21.65
21 - 30	41	32	15	32	15.05
31 - 40	25	12	4	14	7.63
41 - 50	8	2	1	4	2.06
51 - 60	4	2	3	-	1.24
61 - 70	3	1	1	-	.82
Over 70	-	1	1	-	.21
Not Reported	2	-	-	-	.41
TOTAL	363	122	40	176	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	245	79	20	91	68.35
Wet	66	16	5	17	17.30
Muddy	2	1	1	1	.63
Snowy	17	4	-	4	4.43
Icy	24	4	1	4	5.91
Not Reported	9	7	9	52	3.38
TOTAL	363	111	36	169	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	33	3	12	6.96
21 - 30	62	12	61	13.08
31 - 40	56	2	18	11.81
41 - 50	31	1	15	6.54
51 - 60	30	2	12	6.33
Over 60	30	7	10	6.33
Not Reported	232	9	41	48.95
TOTAL	474	36	169	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	416	30	145	87.76
Female	43	6	21	9.07
Not Reported	15	-	3	3.17
TOTAL	474	36	169	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	320	22	133	67.51
Not Familiar	34	2	5	7.17
Not Reported	120	12	31	25.32
TOTAL	474	36	169	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	7	-	1	1.44
Allegheny	54	3	12	11.13
Armstrong	7		8	1.44
Beaver	5			1.03
Bedford	3	1		.62
Berks	10	2	4	2.06
Blair	7		2	1.44
Bradford	3	1		.62
Bucks	3		2	.62
Butler	9	2	2	1.86
Cambria	12		3	2.47
Cameron	3			.62
Carbon	2			.41
Centre	3	2	2	.62
Chester	2		2	.41
Clarion	4			.82
Clearfield	8		1	1.65
Clinton	2	1		.41
Columbia	2		1	.41
Crawford	4		2	.82
Cumberland	6			1.24
Dauphin	4		3	.82
Delaware	6	2	3	1.24
Elk	3			.62
Erie	19	2	11	3.92
Fayette	32		10	6.60
Forest				
Franklin	5			1.03
Fulton				
Greene	1			.21
Huntingdon				
Indiana	7		3	1.44
Jefferson	1		1	.21
Juniata				

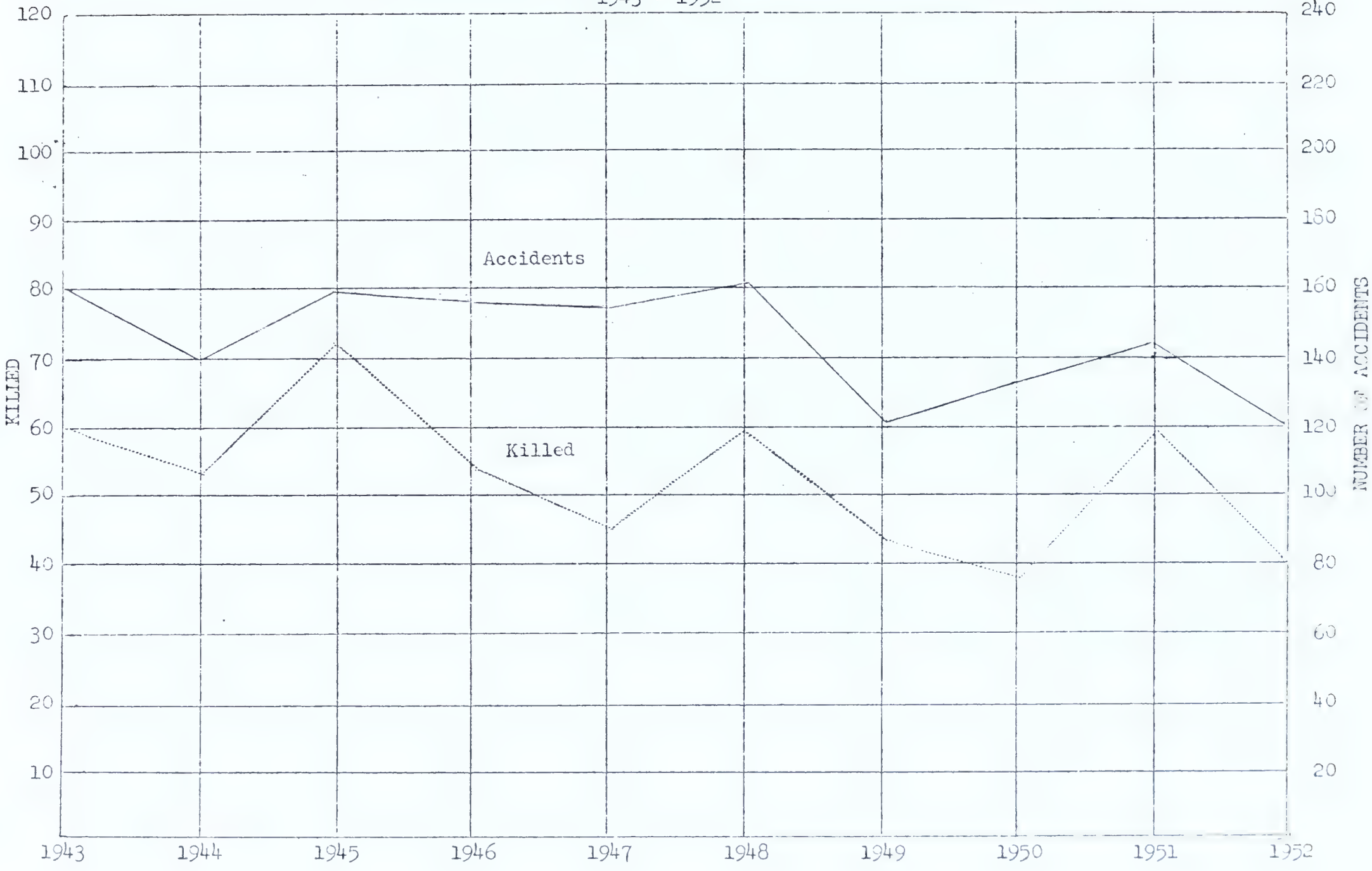
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	8	-	4	1.65
Lancaster	6			1.24
Lawrence	2			.41
Lebanon	9		1	1.86
Lehigh	8	1	4	1.65
Luzerne	17		5	3.51
Lycoming	13	4	1	2.68
McKean	5		1	1.03
Mercer	15	3	6	3.09
Mifflin	2			.41
Monroe	1			.21
Montgomery	21	5	8	4.33
Montour	1		1	.21
Northampton	10		1	2.06
Northumberland	19	1		3.92
Perry	1			.21
Philadelphia	7			1.44
Pike	1		1	.21
Potter	1			.21
Schuylkill	13		2	2.68
Snyder				
Somerset	10	2	2	2.06
Sullivan				
Susquehanna	2	1		.41
Tioga	5			1.03
Union	3		2	.62
Venango	7		2	1.44
Warren	6		3	1.24
Washington	19	3	2	3.92
Wayne				
Westmoreland	21	4	50	4.33
Wyoming				
York	18		7	3.71
TOTAL	485	40	176	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1943 - 1952

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1943	11,137	591	60	161	2,046,145	2.89
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73
1951	10,812	570	61	149	3,338,059	1.71
1952	10,773	485	40	176	3,409,844	1.42

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSING OVER STEAM RAILROADS IN PENNSYLVANIA 1943 - 1952



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
390	Collision with other vehicle	1	103		430						123			1	656	33.33	78.00
3	Collision with fixed object				6										6		.71
28	Struck by taxicab				1			1	19				8	1	28	33.33	3.33
138	Running or walking into side of taxicab								140						140		16.64
2	Boarding or alighting (Standing vehicle)				2										2		.24
-	Falling within vehicle																
2	Caught by vehicle doors				2										2		.24
3	Jumping on or off vehicle in motion				3										3		.36
1	Sudden stop of vehicle				1										1		.12
-	Defect or failure of equipment																
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operating of vehicle																
3	Miscellaneous	1	2		1									1	3	33.34	.36
570	TOTAL	2	105		446			1	159		123		8	3	841		
	Per Cent Killed	66.67						33.33								100.00	
	Per Cent Injured		12.49		53.03				18.90		14.63		.95				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSEN-GERS		TRFS-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
336	Collision with other vehicle		22	6	370					3	281		1	9	674	69.23	43.62
21	Collision with fixed object		2		84								1		87		5.63
81	Struck by autobus							2	71				10	2	81	15.39	5.24
33	Running or walking into side of autobus				4			1	28					1	32	7.69	2.07
239	Boarding or alighting (Standing vehicle)		1		238										239		15.47
122	Falling within vehicle				122										122		7.90
63	Caught by vehicle doors				63										63		4.08
1	Jumping on or off vehicle in motion		1												1		.07
121	Sudden stop of vehicle				131										131		[illegible]
22	Defect or failure of equipment				22										22		1.42
8	Vehicle skidded		1		40										41		2.65
1	Highway defect		1												1		.07
	Apparent reckless operation of vehicle																
50	Miscellaneous	1	10		40				1					1	51	7.69	3.30
1098	TOTAL	1	38	6	1114			3	100	3	281		12	13	1545		
	Per Cent Killed	7.69		46.15		-		23.08		23.08						100.00	
	Per Cent Injured		2.46		72.10		-		6.47		18.19		.78				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
2	Collision with other vehicle				3						2				5		41.7
	Collision with fixed object																
2	Struck by autobus								2						2		16.7
	Running or walking into side of autobus																
1	Boarding or alighting (Standing vehicle)				1										1		8.3
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
1	Sudden stop of vehicle				1										1		8.3
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
3	Miscellaneous		1		1								1		3		25.0
9	TOTAL	-	1	-	6	-	-	-	2	-	2	-	1	-	12		
	Per Cent Killed	-		-		-		-		-		-				-	
	Per Cent Injured		8.3		50.0				16.7		16.7		8.3				100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
40	Collision with other vehicles		9		4			1		11	39			12	52	100.0	80.0
3	Collision with fixed object		2								1				3		4.6
6	Struck by truck								5				1		6		9.3
	Running or walking into side of truck																
1	Boarding or alighting (Standing Vehicle)				1										1		1.5
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
-	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
3	Miscellaneous		3												3		4.6
53	TOTAL	-	14	-	5	-	-	1	5	11	40		1	12	65		
	Per Cent Killed	-		-		-		8.3		91.7						100.0	
	Per Cent Injured		21.5	7.7				7.7		61.6		1.5					100.0

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
17	Collision with other vehicle		2		8					2	10			2	20	100.0	83.3
	Collision with fixed object																
3	Struck by taxicab, autobus or truck								3						3		12.5
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
1	Miscellaneous		1												1		4.2
21	TOTAL	-	3	-	8	-	-	-	3	2	10	-	-	2	24		
	Per Cent Killed									100.0						100.0	
	Per Cent Injured		12.5		33.3				12.5		41.7						100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1950	1	105	3	319	-	-	1	201	3	121	-	2	8	748
1951	-	89	-	312	-	-	1	210	-	82	-	2	1	695
1952	2	105	-	446	-	-	1	159	-	123	-	8	3	841

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1950	-	52	2	1004	-	2	10	108	11	215	-	11	23	1392
1951	-	53	3	1134	-	1	2	117	6	290	1	8	12	1603
1952	1	38	6	1114	-	-	3	100	3	281	-	12	13	1545

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1950	-	-	-	7	-	-	-	-	-	1	-	-	-	8
1951	-	2	-	3	-	-	-	-	-	5	-	-	-	10
1952	-	1	-	6	-	-	-	2	-	2	-	1	-	12

K - Killed; I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1950	3	18	-	14	-	-	2	7	13	56	-	-	18	95
1951	6	22	-	7	-	-	1	7	8	48	3	-	18	84
1952	-	14	-	5	-	-	1	5	11	40	-	1	12	65

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1950	-	7	-	6	-	-	1	1	1	28	-	2	2	44
1951	1	3	-	-	-	-	-	1	3	5	-	-	4	9
1952	-	3	-	8	-	-	-	3	2	10	-	-	2	24

K - Killed; I - Injured

5.9
PENNSYLVANIA STATE LIBRARY
DOCUMENTS SECTION

PENNSYLVANIA PUBLIC UTILITY COMMISSION

1953

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
July 12, 1954

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 609 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $350 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1953 there was a slight increase in casualty accidents involving all transportation utilities, while accidents involving service utilities decreased. The summary which includes all utilities indicates that the total number of accidents decreased .32% during the year and that the number of fatalities increased 5.95% during the same period.

The attached report is submitted for the consideration of the Commission.

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
July 12, 1954

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors Isenberg and Johnson

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1953.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1953 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	60	Canal	1
Street Railways	8	Electric	35
Ferries	18	Gas (Artificial)	35
Motorboats	10	Gas (Natural)	64
Steamboats	1	Pipe Lines	5
Express	1	Sewerage	18
Bus - Scheduled Service	465	Steam Heat	22
Bus - Group and Party	312	Telegraph	2
Taxi - Call and Demand	727	Telephone	136
Truck - Common Carrier	6481	Water	488
Airways	36	Wharfage	3
Incline Plane	3	Stock Yards	3

Total Transportation Utilities	8,122
Total Service Utilities	812
Total	8,934

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1859	152	1939	25.66	56.93	22.58
Street Railway	3066	30	3693	42.31	11.23	43.00
Motor Transportation	1766	37	2424	24.37	13.86	28.22
Electric	365	36	348	5.04	13.48	4.05
Gas	66	8	64	.91	3.00	.75
Water	24	-	24	.33		.28
Telephone & Telegraph	99	4	96	1.37	1.50	1.11
Other Utilities	1	-	1	.01		.01
TOTAL	7210*	267	8533*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	24	1445	1	119	2	199	11	320	2	58	-	24	2	86	-	1	42	2252	15.73	26.22
Trespasser	49	42	1	20	-	2	1	3	-	-	-	-	-	2	-	-	51	69	19.10	.80
Other	2	76	-	28	-	12	24	25	-	-	-	-	1	8	-	-	27	149	10.11	1.73
Passenger, Patron or Consumer	21	216	3	2160	6	1495	-	-	6	6	-	-	1	-	-	-	37	3877	13.86	45.14
Pedestrian	5	3	17	275	11	224	-	-	-	-	-	-	-	-	-	-	33	502	12.36	5.85
Occupant Other Vehicle	51	157	8	1091	18	492	-	-	-	-	-	-	-	-	-	-	77	1740	28.84	20.26
TOTAL	152	1939	30	3693	37	2424	36	348	8	64	-	24	4	96	-	1	267	8533*		
Per Cent Killed	56.93		11.23		13.86		13.48		3.00		-		1.50		-				100.00	
Per Cent Injured	22.58		43.00		28.22		4.05		0.75		0.28		1.11		0.01				100.00	

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
142	Grade Crossings (for details-see appendix)	-	4	-	-	-	-	56	160	56	164	36.84	8.46
15	Collisions	-	21	-	-	-	-	-	2	-	23		1.19
11	Derailments	2	18	19	82	-	-	-	-	21	100	13.82	5.16
60	At station or loading platform	-	7	-	4	-	-	-	49	-	60		3.09
7	Defect or failure of roadway or equipment	-	7	-	-	-	-	-	-	-	7		.36
51	Operating switches	-	51	-	-	-	-	-	-	-	51		2.63
30	Struck overhead or side obstruction	2	28	-	-	-	-	-	-	2	28	1.31	1.44
58	Repairing track or roadbed	1	57	-	-	-	-	-	-	1	57	.66	2.94
62	Struck by flying missile, glass, etc.	-	57	-	3	-	-	-	2	-	62		3.20
118	Coupling or uncoupling	1	117	-	-	-	-	-	-	1	117	.66	6.03
55	Falling on locomotive or car	-	41	-	14	-	-	-	-	-	55		2.84
188	Falling from locomotive or car	6	170	-	3	-	9	-	-	6	182	3.95	9.39
316	Getting on or off locomotive or car	-	240	2	66	-	7	-	1	2	314	1.31	16.19
128	Struck by locomotive or car	9	47	-	-	47	21	2	3	58	71	38.16	3.66
99	Operating hand brakes	-	99	-	-	-	-	-	-	-	99		5.10
191	Sudden starting or stopping of trains	-	187	-	28	-	-	-	8	-	223		11.50
1	Coming in contact with catenary wire	-	-	-	-	-	1	-	-	-	1		.05
22	On or about locomotive	-	23	-	-	-	-	-	-	-	23		1.19
305	Miscellaneous	3	271	-	16	2	4	-	11	5	302	3.29	15.58
1859	TOTAL	24	1445	21	216	49	42	58	236	152	1939		
	Per Cent Killed	15.79		13.81		32.24		38.16				100.00	
	Per Cent Injured		74.52		11.14		2.17		12.17				100.00

* - "Others" consist chiefly of travellers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $350 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	19			-38.70
YARD TRACK	252	271	23.73	+ 4.13
DERAILMENTS:				
MAIN TRACK	263			-17.29
YARD TRACK	344	607	53.15	+ .88
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		220	19.27	-16.35
MISCELLANEOUS		44	3.85	+41.93
TOTAL		1142	100.00	- 6.85

Note: 419 of the 607 Derailments (69.03%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $350 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1951	1356	+ 5.11	4,331,343	+19.91
1952	1226	-9.59	3,723,931	-14.01
1953	1142	-6.85	4,276,666	+14.84

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE *
	1951	1952	1953		1951	1952	1953	
EMPLOYEES	25	33	24	- 27.27	1681	1442	1445	+ 0.21
PASSENGERS	9	5	21	+320.00	177	125	216	+ 72.80
TRESPASSERS	69	55	49	- 10.90	48	29	42	+ 44.83
OTHERS **	65	53	58	+ 9.43	247	255	236	- 7.45
TOTALS	168	146	152	+ 4.11	2153	1851	1939	+ 4.75

* Comparison of 1953 with 1952
** Others consist chiefly of travellers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	-	27	-	1.87
Road Firemen	-	28	-	1.94
Road Conductors	2	95	8.33	6.58
Road Brakemen	7	200	29.16	13.84
Road Flagmen	-	23	-	1.59
Road Baggagemen	-	9	-	.62
Yard Enginemen and Firemen	-	43	-	2.96
Yard Brakemen and Conductors	9	795	37.50	55.02
Yard Switch Tenders	1	4	4.16	.28
Crossing Watchmen	-	1	-	.07
Track Walkers	-	-	-	-
Sectionmen and Work Train Laborers	-	76	-	5.26
Signalmen and Signal Maintainers	-	3	-	.21
Station Baggagemen	-	5	-	.35
Car Cleaners	1	2	4.17	.14
Car Inspectors	1	11	4.17	.76
Car Repairmen	1	9	4.17	.62
Carpenters	1	3	4.17	.21
Dining Car Employees	-	50	-	3.46
Miscellaneous	-	38	-	2.63
Employees Not on Duty	1	23	4.17	1.59
TOTAL	24	1445	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		1	3.70		1	3.57		2	2.06	2	34	17.39
31 - 40		2	7.41		13	46.43		17	17.53	2	55	27.54
41 - 50		2	7.41		8	28.57		11	11.35		39	18.84
51 - 60		14	51.85		2	7.14	2	39	42.27	2	39	19.81
61		2	7.41					2	2.06		3	1.45
62		2	7.41					5	5.15		4	1.93
63		1	3.70					4	4.12	1	5	2.90
64											1	.48
65								6	6.19		1	.48
Over 65		2	7.41					4	4.12		2	.97
Not Reported		1	3.70		4	14.29		5	5.15		17	8.21
TOTAL	-	27	100.00	-	28	100.00	2	95	100.00	7	200	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21					1	2.33		8	.99		9	.73
21 - 30		2	8.69		5	11.63		252	31.34	2	297	24.33
31 - 40		4	17.39		11	25.58	2	240	30.10	4	342	28.15
41 - 50		6	26.09		4	9.30	2	99	12.56	2	169	13.92
51 - 60		6	26.09		10	23.25	2	91	11.57	6	201	16.84
61		1	4.35		2	4.65		11	1.37		21	1.71
62		1	4.35				1	7	.99	1	19	1.63
63					1	2.33		10	1.24	1	21	1.79
64								6	.75		7	.57
65					3	6.98		4	.50		14	1.14
Over 65		1	4.35		2	4.65		6	.75		17	1.38
Not Reported		2	8.69		4	9.30	2	61	7.84	2	94	7.81
TOTAL	-	23	100.00	-	43	100.00	9	795	100.00	18	1211	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

No. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
39	Collision of cars		6		118				1						125		3.38
1035	Collision of car and vehicle		16		405			8	1088		13		23	8	1545	26.67	41.84
273	Struck by car	1	1	2	6					16	255		3	19	265	63.34	7.18
16	Derailment of car		2		27				2	1				1	31	3.33	.84
3	Contact with overhead or side obst.				3										3		.08
1	Contact with trolley or feed wire or third rail										1				1		.03
30	Sudden stop		3		35										38		1.03
48	Defect or failure of roadway or eqp.		3		45						1				49		1.33
216	Caught by doors				217						1				218		5.90
110	Boarding standing car		1		109										110		2.98
331	Alighting from car				332										332		8.99
509	Falling within car				512										512		13.86
15	Jumping on or off car while in motion						20								20		.54
258	At elevated or subway platforms			1	257								1	1	258	3.33	6.99
47	Repair work on right of way		47												47		1.27
26	Struck by flying missile, glass, etc.		6		24						1				31		.84
*109	Miscellaneous		34		70	1					3		1	1	108	3.33	2.92
3066	TOTAL	1	119	3	2160	1	20	8	1091	17	275	-	28	30	3693		
	Per Cent Killed	3.33		10.0		3.33		26.67		56.67						100.00	
	Per Cent Injured		3.22		58.49		0.54		29.54		7.45		0.76				100.00

K - Killed; I - Injured

* Includes one Incline Plane Accident - 1 Trespasser killed.

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1953 WITH 1952	YEAR			COMPARISON OF 1953 WITH 1952
	1951	1952	1953		1951	1952	1953	
Employees	1	4	I	- 75.00	155	116	119	+ 2.58
Passengers	5	7	3	- 57.14	2461	2277	2160	- 5.14
Trespassers	2	5	1	- 80.00	15	13	20	+53.84
Occupants of other vehicles	14	13	8	- 38.46	964	957	1091	+14.00
Pedestrians	16	14	17	+ 21.43	301	260	275	+ 5.77
Others	-	-	-	-	39	30	28	- 6.67
TOTAL	38	43	30	- 30.23	3935	3653	3693	+ 1.09

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
892	Collision with other vehicle	2	149	6	867			2	5	18	489			28	1510	75.68	62.30
19	Collision with fixed object		8		32										40		1.65
119	Struck by auto-bus, taxicab or truck		2		1			9	97		2		11	9	113	24.32	4.66
118	Running or walking into side of auto-bus, taxicab or truck				2				118				1		121		4.99
221	Boarding or alighting (standing vehicle)		5		217										222		9.16
90	Falling within vehicle				90										90		3.71
64	Caught by vehicle doors		1		64										65		2.68
6	Jumping on or off vehicle in motion				4		2								6		.25
146	Sudden stop of vehicle		1		161										162		6.68
6	Defect or failure of equipment				5						1				6		.25
8	Vehicle skidded		3		7				1						11		.45
1	Highway defect		1												1		.04
-	Apparent reckless operation of vehicle																
76	Miscellaneous		29		45				3						77		3.18
1766	TOTAL	2	199	6	1495	-	2	11	224	18	492	-	12	37	2424		
	Per Cent Killed	5.40		16.22		-		29.73		48.65						100.00	
	Per Cent Injured		8.21		61.67		0.08		9.24		20.30		0.50				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	727	653	3	942	280	$159,117.37
Schedule Route (Bus Service)	465	1001	14	1313	384	270,248.50
Group and Party (Bus Service)	312	4	-	9	5	2,335.00
Freight and Merchandise (Truck)	6481	80	18	118	94	137,708.69
Contract Carrier (Persons and Property)	609	28	2	42	33	94,455.28
TOTAL	8594	1766	37	2424	796	$663,864.84

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

		CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
YEAR	NUMBER OF REGULATED OPERATORS	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1951	9504	2566	- 0.47%	35	- 31.37%	2401	+ 4.98%	$652,196.85	- 5.22%
1952	8910	2369	- 7.67%	30	- 14.28%	2487	+ 3.58%	532,860.98	- 18.30%
1953	8594	2462	+ 3.92%	37	+ 23.33%	2424	- 2.53%	663,864.84	+ 24.58%

Note: Only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation							1		1		2.1	
27	Automobile accident		25				3				28		5.3
15	Burns - not from electric source		11						5		16		3.0
3	Defect or failure of equipment or machines		3								3		0.6
1	Drowning					1				1		2.1	
61	Electric - Contact with charged wires or equipment	9	17	1	2	24	25	1		35	44	72.9	8.3
3	Explosion	1	1					5	1	6	2	12.5	0.4
-	Failure to use protective devices provided												
159	Falling - (Other than in water)	1	157				1			1	158	2.1	29.6
60	Handling materials		60								60		11.3
8	Infection from minor wounds		8								8		1.5
29	Involving use of tools - no defect		29								29		5.4
61	Miscellaneous	1	58		1		1			1	60	2.1	11.2
127	Striking against or struck by object	3	120		2		3			3	125	6.2	23.4
555	TOTAL	15	489	1	5	25	33	7	6	48	533		
	Per Cent Killed	31.2		2.1		52.1		14.6				100.0	
	Per Cent Injured		91.8		0.9		6.2		1.1				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1951	1952	1953	COMPARISON OF 1953 WITH 1952	1951	1952	1953	COMPARISON OF 1953 WITH 1952
Employees	15	6	15	+ 150%	658	550	490	- 10.91%
Trespassers		1	1	-	1		5	-
Others	30	25	25	-	86	50	32	- 36.00%
Patrons or Consumers	2	1	7	+ 600%	2	6	6	-
TOTAL	47	33	48	+ 45.45%	747	606	533	- 12.04%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
10	Automobile accident		11								11		3.2
5	Burns - not from electric source		5								5		1.4
3	Defect or failure of equipment or machinery		3								3		0.9
1	Drowning					1				1		2.8	
56	Electric - Contact with charged wires or equipment	8	15	1	2	23	25			32	42	88.9	12.1
-	Explosion												
-	Failure to use protective devices provided												
99	Falling - (Other than in water)	1	98							1	98	2.8	28.2
45	Handling materials		45								45		12.9
6	Infection from minor wounds		6								6		1.7
16	Involving use of tools - no defect		16								16		4.6
43	Miscellaneous		42		1						43		12.3
81	Striking against or struck by objects	2	79							2	79	5.5	22.7
365	TOTAL	11	320	1	3	24	25	-	-	36	348		
	Per Cent Killed	30.5		2.8		66.7		-				100.0	
	Per Cent Injured		91.9		0.9		7.2		-				100.0

K- Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1951	12	445	-	-	22	26	-	-	34	471
1952	4	353	1	-	17	25	-	1	22	379
1953	11	320	1	3	24	25	-	-	36	348

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation							1	-	1	-	12.5	
4	Automobile Accident		4								4		6.3
7	Burns - not from electric source		3						5		8		12.5
-	Defect or failure of equipment or machine												
-	Drowning												
-	Electric - Contact with charged wires or equipment												
3	Explosion	1	1					5	1	6	2	75.0	3.1
-	Failure to use protective devices provided												
16	Falling - (Other than in water)		16								16		25.0
7	Handling materials		7								7		10.9
1	Infection from minor wounds		1								1		1.6
2	Involving use of tools - no defect		2								2		3.1
8	Miscellaneous	1	7							1	7	12.5	10.9
17	Striking against or struck by objects		17								17		26.6
66	TOTAL	2	58	-	-	-	-	6	6	8	64		
	Per Cent Killed	25.0						75.0				100.0	
	Per Cent Injured		90.6						9.4				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1951	1	88	-	-	7	49	2	2	10	139
1952	1	82	-	-	8	15	1	4	10	101
1953	2	58	-	-	-	-	6	6	8	64

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
2	Automobile accident		2								2		8.3
2	Burns - not from electric source		2								2		8.3
-	Defect or failure of equipment or machines												
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
4	Falling (Other than in water)		4								4		16.7
3	Handling materials		3								3		12.5
-	Infection from minor wounds												
6	Involving use of tools - no defect		6								6		25.0
1	Miscellaneous		1								1		4.2
6	Striking against or struck by objects		6								6		25.0
24	TOTAL		24								24		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1951	1	23	-	-	-	1	-	-	1	24
1952	1	22	-	-	-	-	-	-	1	22
1953	-	24	-	-	-	-	-	-	-	24

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
11	Automobile accident		8				3				11		11.4
-	Burns - not from electric source												
	Defect or failure of equipment or machines												
-	Drowning												
5	Electric - Contact with charged wires or equipment	1	2			1		1		3	2	75.0	2.1
-	Explosion												
-	Failure to use protective devices provided												
40	Falling - (Other than in water)		39				1				40		41.7
5	Handling materials		5								5		5.2
1	Infection from minor wounds		1								1		1.0
5	Involving use of tools - no defects		5								5		5.2
9	Miscellaneous		8				1				9		9.4
23	Striking against or struck by objects	1	18		2		3			1	23	25.0	24.0
99	TOTAL	2	86	-	2	1	8	1	-	4	96		
	Per Cent Killed	50.0				25.0		25.0				100.0	
	Per Cent Injured		89.6		2.1		8.3						100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1951	1	100	-	1	1	10	-	-	2	111
1952	-	89	-	-	-	10	-	1	-	100
1953	2	86	-	2	1	8	1	-	4	96

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
	Automobile accident												
1	Burns - not from electric source		1								1		100.
	Defect or failure of equipment or machines												
	Drowning												
	Electric - Contact with charged wires or equipment												
	Explosion												
	Failure to use protective devices provided												
	Falling - (Other than in water)												
	Handling materials												
	Infection from minor wounds												
	Involving use of tools - no defects												
	Miscellaneous												
	Striking against or struck by objects												
1	TOTAL		1								1		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1951	-	2	-	-	-	-	-	-	-	2
1952	-	4	-	-	-	-	-	-	-	4
1953	-	1	-	-	-	-	-	-	-	1

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1951 and 1952

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1953 WITH 1952	YEAR			COMPARISON OF 1953 WITH 1952	YEAR			COMPARISON OF 1953 WITH 1952
	1951	1952	1953		1951	1952	1953		1951	1952	1953	
Steam Railroad	2134	1853	1859	+ .32%	168	146	152	+ 4.11%	2153	1851	1939	+ 4.75%
Street Railway	3377	3074	3066	+ .39%	38	43	30	-30.23%	3935	3653	3693	+ 1.09%
Motor Transportation	1797	1751	1766	+ .86%	35	30	37	+23.33%	2401	2487	2424	- 2.53%
Electric	484	387	365	- 5.68%	34	22	36	+63.63%	471	379	348	- 8.18%
Gas	97	92	66	-28.26%	10	10	8	-20.00%	139	101	64	-36.63%
Water	25	23	24	+ 4.34%	1	1	-	-	24	22	24	+ 9.09%
Telephone & Telegraph	110	97	99	+ 2.06%	2	-	4	-	111	100	96	- 4.00%
Other Utilities	2	4	1	-75.00%	-	-	-	-	2	4	1	-75.00%
TOTAL	8006*	7233*	7210*	- .32%	288	252	267	+ 5.95%	9209*	8562*	8533*	- .34%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX

DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals watchmen, etc.	2179	20.50
Protected by trainmen	1579	14.85
Total Protected	3758	35.35
Unprotected (see note)	6871	64.65
TOTAL CROSSINGS	10,629	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	365	9.71
Watchmen	243	6.47
Flashing light signals	1429*	38.03
Other visual signals	34**	.90
Bells	108	2.87
Trainmen	1579	42.02
TOTAL	3758	100.00

* - Additional protection by short-arm gates at 166 crossings.

**- Includes ten crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	161	73		2	5	2	166	77	243	52.60
Protected by gates	13	3		2			13	5	18	3.90
Protected by watchmen	12	6		1			12	7	19	4.11
Protected by bells	2						2		2	.43
Protected by visual signals	111	28		2	1	2	112	32	144	31.17
Protected by trainmen	28	7			1		29	7	36	7.79
Total Accidents at Protected Crossings	166	44		5	2	2	168	51	219	47.40
Total Accidents--Non Casualty	327				7		334			72.29
Total Accidents--Casualty		117		7		4		128		27.71
TOTAL ACCIDENTS	444		7		11				462	
Per Cent of Total Accidents	96.10		1.52		2.38					100.00

NC - Non Casualty; C - Casualty
* See "Note" Page 16 under Table A

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	28	90	2			2	30	92	122	61.30
Protected by gates	1	4		2			1	6	7	3.52
Protected by watchmen	5	5		1			5	6	11	5.53
Protected by bells										
Protected by visual signals	9	29	2			11	11	40	51	25.63
Protected by trainmen	1	7					1	7	8	4.02
TOTAL	44	135	4	3	-	13	48	151	199	100.00
Killed and Injured at protected crossings	16	45	2	3	-	11	18	59	77	
Per Cent of Total Killed & Injured	89.95		3.52		6.53					100.00

K - Killed; I - Injured
* See "Note" Page 16 under Table A

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1951, 1952 and 1953

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
	1951	2180	27		50.0
*PROTECTED	1952	2176	23	14.8	
	1953	2179	17		
	1951	8632	34		70.0
**UNPROTECTED	1952	8597	17	50.0	
	1953	8450	31		82.4
			INJURED		
	1951	2180	65		22.6
*PROTECTED	1952	2176	59	9.2	
	1953	2179	52	11.9	
	1951	8632	84	19.2	
**UNPROTECTED	1952	8597	117		39.2
	1953	8450	99		15.4

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1951	185	- 3.6%	19	+ 58.3%	58	+ 18.3%
		1952	161	- 13.0%	13	- 31.6%	44	- 24.1%
		1953	151	- 6.2%	14	+ 7.7%	45	+ 2.3%
	UNPROTECTED**	1951	143	+ 5.1%	9	+ 50.0%	27	- 12.9%
		1952	139	- 2.8%	5	- 44.4%	36	+ 33.3%
		1953	97	- 30.2%	2	- 60.0%	28	- 22.2%
RURAL	PROTECTED	1951	84	+ 21.7%	11	+ 83.3%	21	+ 31.0%
		1952	56	- 33.3%	10	- 9.1%	18	- 14.3%
		1953	68	+ 21.4%	4	- 60.0%	14	- 22.2%
	UNPROTECTED**	1951	158	+ 3.3%	22	+ 57.1%	43	- 29.5%
		1952	129	- 18.4%	12	- 45.5%	78	+ 81.4%
		1953	146	+ 13.2%	28	+133.3%	64	- 17.9%

* - Cities or boroughs with population over 2,500.

** - See "Note" Page 16 under Table A.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1951, 1952 and 1953

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1951	261		2.8
	1952	244	6.5	
	1953	233	4.5	
		PERSONS KILLED		
	1951	25		
	1952	29		16.0
	1953	36		24.1
		PERSONS INJURED		
	1951	50	21.9	
	1952	104		108.0
	1953	71	31.7	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1951	309		4.4
	1952	241	22.0	
	1953	229	5.0	
		PERSONS KILLED		
	1951	36		176.9
	1952	11	69.4	
	1953	12		9.1
		PERSONS INJURED		
	1951	99		6.4
	1952	72	27.3	
	1953	80		11.1

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	22	4.76	1	13
1 to 1:59 a.m.	24	5.19	1	6
2 to 2:59 a.m.	12	2.60	-	5
3 to 3:59 a.m.	13	2.81	-	4
4 to 4:59 a.m.	8	1.73	-	1
5 to 5:59 a.m.	8	1.73	-	12
6 to 6:59 a.m.	21	4.55	-	6
7 to 7:59 a.m.	12	2.60	2	6
8 to 8:59 a.m.	8	1.73	3	4
9 to 9:59 a.m.	17	3.68	4	3
10 to 10:59 a.m.	15	3.25	-	3
11 to 11:59 a.m.	23	4.98	2	9
Noon to 12:59 p.m.	21	4.55	1	6
1 to 1:59 p.m.	25	5.41	1	7
2 to 2:59 p.m.	25	5.41	3	12
3 to 3:59 p.m.	18	3.89	10	1
4 to 4:59 p.m.	23	4.98	7	9
5 to 5:59 p.m.	29	6.28	5	7
6 to 6:59 p.m.	19	4.11	-	2
7 to 7:59 p.m.	25	5.41	-	6
8 to 8:59 p.m.	21	4.55	-	4
9 to 9:59 p.m.	28	6.06	-	8
10 to 10:59 p.m.	24	5.19	3	14
11 to 11:59 p.m.	21	4.55	5	3
Not Reported				
TOTAL	462	100.0	48	151

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	33	8.22	8	9
Monday	65	14.07	6	23
Tuesday	55	11.90	3	14
Wednesday	63	13.64	1	19
Thursday	79	17.10	5	24
Friday	79	17.10	10	23
Saturday	83	17.97	15	39
TOTAL	462	100.00	48	151

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	49	10.61	9	13
February	33	7.14	3	8
March	41	8.88	2	9
April	42	9.09	2	22
May	44	9.52	4	21
June	31	6.71	1	9
July	30	6.49	7	13
August	24	5.19	2	6
September	29	6.28	6	9
October	36	7.79	4	6
November	41	8.88	2	14
December	62	13.42	6	21
TOTAL	462	100.00	48	151

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED
1951, 1952 and 1953

CHARACTER OF TRACK	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1951	531	60	139
	1952	457	39	171
	1953	416	47	139
Public Siding	1951	32	-	6
	1952	20	1	4
	1953	34	-	12
Private Siding	1951	7	1	4
	1952	8	-	1
	1953	12	1	-
Private Grade Crossing (Private Road)	1951	92	2	15
	1952	54	8	16
	1953	51	8	13

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1951, 1952 and 1953

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1951	127	53	143
	1952	108	31	124
	1953	117	44	135
Pedestrians	1951	13	8	5
	1952	11	4	7
	1953	7	4	3
Streetcars Autobuses Taxicabs	1951	1	-	1
	1952	2	4	45
	1953	3	-	12
Bicycles Motorcycles Wagons	1951	3	2	1
	1952	1	1	-
	1953	3	-	1

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES
1951, 1952 and 1953

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1951	227		
	1952	206	9.3	
	1953	166	19.4	
Protected	1951	199	1.0	
	1952	157	21.1	
	1953	168		7.0

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	-	2	.27
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	1	.14
Auto driven through lowered gates and struck by engine or train	1	2	4	.54
Auto stalled on crossing and struck by engine or train	-	1	4	.54
Auto struck by engine or train - gates not lowered	-	1	5	.68
Auto struck by engine or train - gates out of order	-	-	1	.14
Auto driven into side of moving train - gates out of order	-	-	-	
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	36	77	227	30.72
Auto driven into side of engine or train moving over crossing	-	33	114	15.42
Auto driven into side of engine or train standing on crossing	1	8	19	2.57
Auto stalled on crossing and struck by engine or train	6	15	74	10.01
Total Accidents Involving Contact between Train and Auto	44	137	451	61.03
Auto colliding with crossing gates - No contact with train	-	-	253	34.24
Auto colliding with flashing light signal installations-No contact with trains	1	3	35	4.73
Total Accidents Involving Automobiles at Grade Crossings	45	140	739	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	42	21	15	19	13.64
Passenger train - reverse movement	26	6	-	7	6.93
Freight train - normal movement	190	74	30	86	57.14
Freight train - reverse movement	3	-	-	-	.65
Freight train - car ahead of engine	6	-	-	-	1.30
Switching movement - engine normal ahead of draft	25	9	-	11	7.36
Switching movement - engine reverse ahead of draft	2	1	-	1	.65
Switching movement - engine pushing cars	10	2	-	11	2.60
Light engine - normal movement	25	14	3	14	8.44
Light engine - reverse movement	4	1	-	2	1.08
Motor track cars	1	-	-	-	.21
Cars not attached					
TOTAL	334	128	48	151	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1951, 1952 and 1953

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	401	1951	297*	0.740	7	14
	375	1952	289*	0.771	-	17
	365	1953	272*	0.745	1	4
Watchman	267	1951	41	0.153	3	3
	262	1952	32	0.122	1	10
	243	1953	27	0.111	5	10
Bells	115	1951	8	0.069	-	2
	113	1952	6	0.053	-	-
	108	1953	2	0.018	-	-
Visual Signals	1397	1951	191*	0.137	13	45
	1426	1952	165*	0.116	17	38
	1463	1953	174*	0.118	10	32
Trainmen	1471	1951	46	0.031	3	14
	1506	1952	31	0.021	-	3
	1579	1953	35	0.022	1	7

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAIN AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1951	8	1	3
	1952	9	-	7
	1953	5	-	1
Gates out of order	1951	4	-	2
	1952	2	-	2
	1953	1	-	-
Persons passing under or around lowered gates	1951	6	3	3
	1952	4	2	2
	1953	2	-	2
Automobile driven through lowered gates striking or being struck by train	1951	14	7	10
	1952	6	-	1
	1953	6	1	2
Unassigned	1951	10	-	-
	1952	8	-	-
	1953	4	-	1

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1951, 1952 and 1953

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1951	260	4.4	
	1952	260	-	-
	1953	253	2.7	
Flashing light signals struck and damaged	1951	41		2.5
	1952	37	9.8	
	1953	35	5.4	

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1944-1953

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1944	27	1	8
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8
1951	27	4	4
1952	20	-	8
1953	12	-	5

TABLE T - CONDITION ON WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	215	87	33	104	65.37
Cloudy	50	19	8	19	14.94
Fog	13	2	2	2	3.25
Rain	36	16	5	19	11.25
Snow	20	4	-	7	5.19
TOTAL	334	128	48	151	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	12	8	1	8	4.33
1 - 5	118	15	-	29	23.79
6 - 10	65	23	2	28	19.05
11 - 20	61	33	8	37	20.35
21 - 30	35	23	17	22	12.55
31 - 40	29	14	7	21	9.31
41 - 50	4	4	5	2	1.73
51 - 60	7	6	4	3	2.81
61 - 70	2	2	4	1	.87
Over 70	1	-	-	-	.21
Not Reported					
TOTAL	334	128	48	151	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	246	82	29	105	72.09
Wet	53	22	6	25	16.48
Muddy	1	1	-	1	.44
Snowy	15	5	1	6	4.39
Icy	12	5	2	7	3.74
Not Reported	7	6	6	4	2.86
TOTAL	334	121	44	148	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	44	14	23	9.67
21 - 30	86	6	49	18.90
31 - 40	50	3	17	10.99
41 - 50	27	3	15	5.94
51 - 60	31	4	19	6.81
Over 60	25	4	6	5.49
Not Reported	192	10	19	42.20
TOTAL	455	44	148	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENT

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	409	39	133	89.89
Female	40	1	14	8.79
Not Reported	6	4	1	1.32
TOTAL	455	44	148	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	316	22	114	69.45
Not Familiar	18	-	2	3.96
Not Reported	121	22	32	26.59
TOTAL	455	44	148	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	6		1	1.30
Allegheny	46	6	12	9.95
Armstrong	3			.65
Beaver	4		3	.87
Bedford	2		1	.43
Berks	7		2	1.52
Blair	4			.87
Bradford	2			.43
Bucks	8		3	1.73
Butler	6		1	1.30
Cambria	14		11	3.03
Cameron	2	2	5	.43
Carbon	1			.22
Centre	8		4	1.73
Chester	3	4		.65
Clarion	1			.22
Clearfield	14	6	3	3.03
Clinton	8	1	1	1.73
Columbia	2		1	.43
Crawford	5		4	1.08
Cumberland	3			.65
Dauphin	2			.43
Delaware	7	1	3	1.52
Elk	3			.65
Erie	23	4	5	4.98
Fayette	24	4	10	5.19
Forest				
Franklin	5			1.08
Fulton				
Greene				
Huntingdon	2			.43
Indiana	5		3	1.08
Jefferson	3			.65
Juniata				

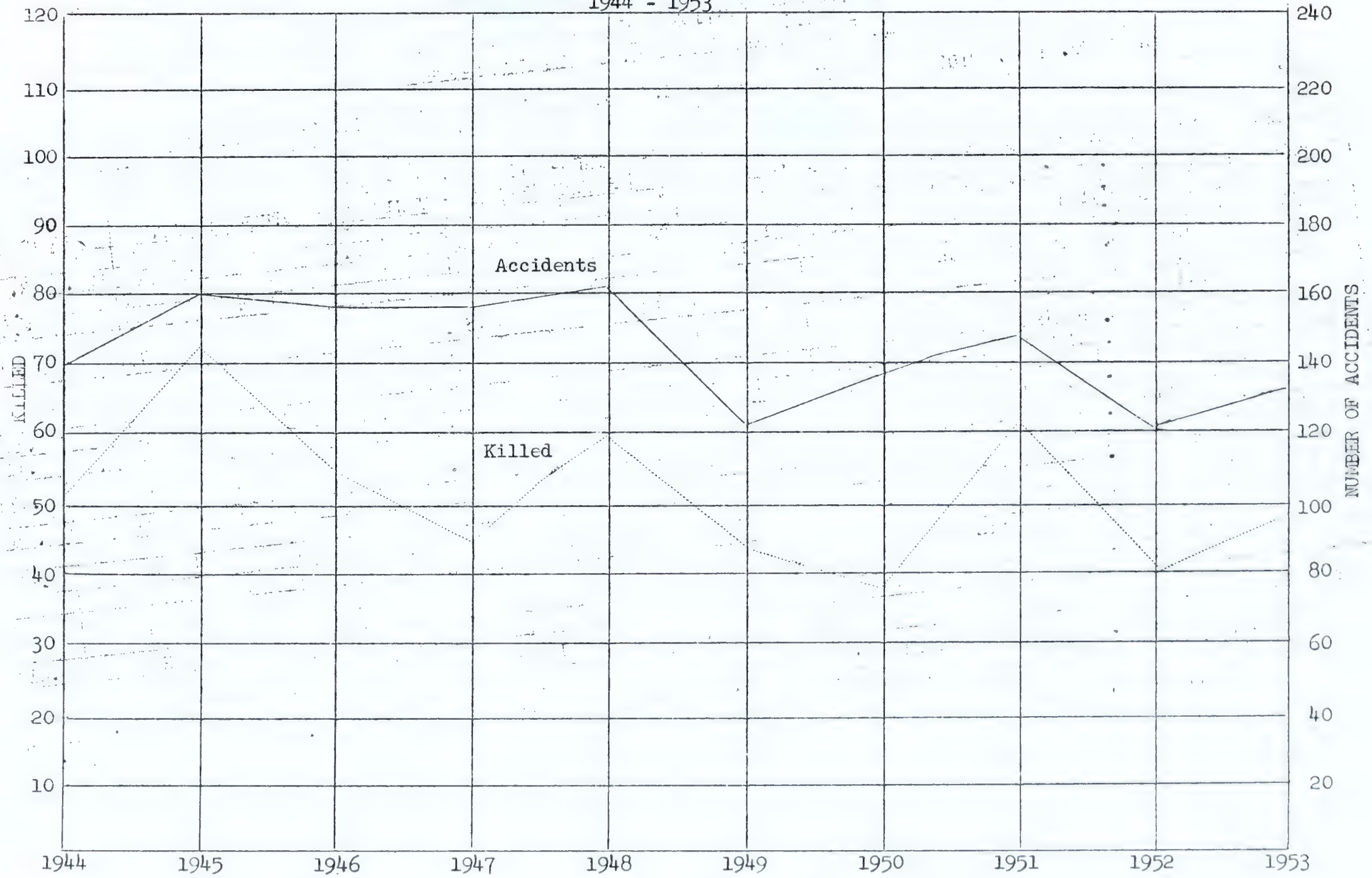
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	11	1	5	2.38
Lancaster	11	1	12	2.38
Lawrence	4	1	2	.87
Lebanon	7		2	1.52
Lehigh	10	4	5	2.16
Luzerne	17	1	7	3.67
Lycoming	6		1	1.30
McKean	8		2	1.73
Mercer	12		5	2.60
Mifflin	4		1	.87
Monroe	2		1	.43
Montgomery	17	2	1	3.67
Montour	1			.22
Northampton	12	1	2	2.60
Northumberland	13		6	2.81
Perry				
Philadelphia	5	1	1	1.08
Pike				
Potter				
Schuylkill	12		2	2.60
Snyder	1			.22
Somerset	12		5	2.60
Sullivan				
Susquehanna	1			.22
Tioga	4			.87
Union	3	1		.65
Venango	4		1	.87
Warren	6	3	1	1.30
Washington	14	2	9	3.03
Wayne				
Westmoreland	28	2	6	6.06
Wyoming	3		1	.65
York	11			2.38
TOTAL	462	48	151	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1944 - 1953

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS			MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1944	11,058	574	53	179	1,974,317	2.91
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73
1951	10,812	570	61	149	3,338,059	1.71
1952	10,773	485	40	176	3,409,844	1.42
1953	10,629	462	48	151	3,455,695	1.34

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSING OVER STEAM RAILROADS IN PENNSYLVANIA 1944 - 1953



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
507	Collision with other vehicle	2	98		544			1	3		143			3	788	100.0	83.65
6	Collision with fixed object		1		6										7		.74
31	Struck by taxicab				1				28				4		33		3.50
92	Running or walking into side of taxicab				2				93						95		10.08
-	Boarding or alighting (Standing vehicle)																
1	Falling within vehicle				1										1		.11
1	Caught by vehicle doors				1										1		.11
4	Jumping on or off vehicle in motion				4										4		.43
7	Sudden stop of vehicle				9										9		.96
-	Defect or failure of equipment																
2	Vehicle skidded		2												2		.21
-	Highway defect																
-	Apparent reckless operating of vehicle																
2	Miscellaneous				2										2		.21
653	TOTAL	2	101		570			1	124		143		4	3	942		
	Per Cent Killed	66.66						33.34								100.0	
	Per Cent Injured		10.72		60.51				13.16		15.18		.43				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
299	Collision with other vehicle		28	5	313					3	236			8	578	57.14	44.02
9	Collision with fixed object		2		26										28		2.13
79	Struck by autobus		2					6	63		2		6	6	73	42.86	5.56
25	Running or walking into side of autobus								24				1		25		1.91
220	Boarding or alighting (Standing Vehicle)		5		216										221		16.83
88	Falling within vehicle				88										88		6.70
63	Caught by vehicle doors		1		63										64		4.88
2	Jumping on or off vehicle in motion						2								2		.15
139	Sudden stop of vehicle		1		152										153		11.65
5	Defect or failure of equipment				5										5		.38
5	Vehicle skidded				7				1						8		.61
1	Highway defect		1												1		.08
	Apparent reckless operation of vehicle																
66	Miscellaneous		22		42				3						67		5.10
1001	TOTAL		62	5	912		2	6	92	3	238		7	14	1313		
	Per Cent Killed			35.71				42.86		21.43						100.00	
	Per Cent Injured		4.72		69.46		0.15		7.01		18.13		0.53				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1	Collision with other vehicle				6										6		66.7
	Collision with fixed object																
	Struck by autobus																
	Running or walking into side of autobus																
1	Boarding or alighting (Standing vehicle)				1										1		11.1
1	Falling within vehicle				1										1		11.1
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
	Vehicle skidded																
	Highway defect																
	Apparent reckless operation of vehicle																
1	Miscellaneous				1										1		11.1
4	TOTAL				9										9		
	Per Cent Killed																
	Per Cent Injured				100.0												100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
63	Collision with other vehicles		16	1	2			1	1	14	82			16	101	88.9	85.6
2	Collision with fixed object		3												3		2.5
8	Struck by truck							2	6				1	2	7	11.1	5.9
1	Running or walking into side of truck								1						1		0.9
-	Boarding or alighting (Standing Vehicle)																
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
1	Defect or failure of equipment										1				1		0.9
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operation of vehicle																
5	Miscellaneous		5												5		4.2
80	TOTAL		24	1	2			3	8	14	83		1	18	118		
	Per Cent Killed			5.5				16.7		77.8						100.0	
	Per Cent Injured		20.3		1.7				6.8		70.4		0.8				100.0

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
22	Collision with other vehicle		7		2					1	28			1	37	50.0	88.2
2	Collision with fixed object		2												2		4.7
1	Struck by taxicab, autobus or truck							1						1		50.0	
	Running or walking into side of taxicab, autobus or truck																
	Boarding or alighting (Standing vehicle)																
	Falling within vehicle																
	Caught by vehicle doors																
	Jumping on or off vehicle in motion																
	Sudden stop of vehicle																
	Defect or failure of equipment																
1	Vehicle skidded		1												1		2.4
	Highway defect																
	Apparent reckless operation of vehicle																
2	Miscellaneous		2												2		4.7
28	TOTAL		12		2			1		1	28			2	42		
	Per Cent Killed							50.0		50.0						100.0	
	Per Cent Injured		28.6		4.7						66.7						100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1951	-	89	-	312	-	-	1	210	-	82	-	2	1	695
1952	2	105	-	446	-	-	1	159	-	123	-	8	3	841
1953	2	101	-	570	-	-	1	124	-	143	-	4	3	942

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1951	-	53	3	1134	-	1	2	117	6	290	1	8	12	1603
1952	1	38	6	1114	-	-	3	100	3	281	-	12	13	1545
1953	-	62	5	912	-	2	6	92	3	238	-	7	14	1313

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1951	-	2	-	3	-	-	-	-	-	5	-	-	-	10
1952	-	1	-	6	-	-	-	2	-	2	-	1	-	12
1953	-	-	-	9	-	-	-	-	-	-	-	-	-	9

K - Killed; I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1951	6	22	-	7	-	-	1	7	8	48	3	-	18	84
1952	-	14	-	5	-	-	1	5	11	40	-	1	12	65
1953	-	24	1	2	-	-	3	8	14	83	-	1	18	118

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1951	1	3	-	-	-	-	-	1	3	5	-	-	4	9
1952	-	3	-	8	-	-	-	3	2	10	-	-	2	24
1953	-	12	-	2	-	-	1	-	1	28	-	-	2	42

K - Killed; I - Injured

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

1954

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
July 11, 1955

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
July 11, 1955

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors Isenberg and Johnson

We have prepared and submit herewith a report of accidents involving the facilities of operations of public utilities in Pennsylvania in 1954.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1954 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	59	Canal	1
Street Railways	8	Electric	29
Ferries	14	Gas (Artificial)	28
Motorboats	12	Gas (Natural)	66
Steamboats	1	Pipe Lines	8
Express	1	Sewerage	15
Bus - Scheduled Service	447	Steam Heat	22
Bus - Group and Party	315	Telegraph	3
Taxi - Call and Demand	721	Telephone	126
Truck - Common Carrier	6167	Water	413
Airways	37	Wharfage	1
Incline Plane	3		
Stock Yards	2		

Total Transportation Utilities	7,787
Total Service Utilities	712
Total	8,499

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 593 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $350 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1954 there was a decrease in casualty accidents involving all transportation utilities, while accidents involving service utilities showed a slight increase. The summary which includes all utilities indicates that the total number of accidents decreased 7.28% during the year and that the number of fatalities was reduced 28.46% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1409	96	1420	20.98	50.26	18.43
Street Railway	2790	27	3163	41.55	14.14	41.04
Motor Transportation	1944	30	2563	28.95	15.71	33.26
Electric	363	32	348	5.41	16.75	4.51
Gas	78	3	82	1.16	1.57	1.06
Water	34	1	33	.51	.52	.43
Telephone & Telegraph	96	2	97	1.43	1.05	1.26
Other Utilities	1	-	1	.01		.01
TOTAL	6685*	191	7672*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	15	1029	2	109	4	242	15	325		72	1	33	2	82		1	39	1893	20.42	24.56
Trespasser	38	34	4	6	-	2	1	2									43	44	22.51	.57
Other	41	221		31	1	27	16	19		3				11			58	312	30.37	4.05
Passenger, Patron or Consumer	2	136	4	2047	3	1517		2	3	7				4			12	3713	6.28	48.18
Pedestrian			13	209	11	229											24	438	12.57	5.68
Occupant Other Vehicle			4	761	11	546											15	1307	7.85	16.96
TOTAL	96	1420	27	3163	30	2563	32	348	3	32	1	33	2	97	-	1	191	7672*		
Per Cent Killed	50.26		14.14		15.71		16.75		1.57		0.52		1.05		-				100.00	
Per Cent Injured		18.43		41.04		33.26		4.51		1.06		0.43		1.26		0.01				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
116	Grade Crossings (for details-see appendix)		4					36	136	36	140	37.50	9.86
9	Collisions	1	13		6					1	19	1.04	1.34
5	Derailments		9								9		.63
54	At station or loading platform		9		14				31		54		3.80
11	Defect or failure of roadway or equipment		10		1						11		.77
56	Operating switches		56								56		3.95
22	Struck overhead or side obstruction	1	20				1			1	21	1.04	1.48
47	Repairing track or roadbed		47								47		3.31
33	Struck by flying missile, glass, etc.		27		6				1		34		2.40
78	Coupling or uncoupling		78								78		5.49
50	Falling on locomotive or car		35		16						51		3.59
103	Falling from locomotive or car	3	94	1	2		2	1	1	5	99	5.21	6.97
240	Getting on or off locomotive or car		166		66		5		3		240		16.90
77	Struck by locomotive or car	8	19			29	17	1	3	38	39	39.58	2.75
75	Operating hand brakes		75								75		5.28
144	Sudden starting or stopping of trains	2	128		11		1	1	19	3	159	3.13	11.20
	Coming in contact with catenary wire												
19	On or about locomotive		19								19		1.34
270	Miscellaneous		220	1	14	9	8	2	27	12	269	12.50	18.94
1409	TOTAL	15	1029	2	136	38	34	41	221	96	1420		
	Per Cent Killed	15.63		2.08		39.58		42.71				100.00	
	Per Cent Injured		72.47		9.58		2.39		15.56				100.00

* - "Others" consist chiefly of travelers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $350 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	16			-15.79
YARD TRACK	139	155	18.95	-44.84
DERAILMENTS:				
MAIN TRACK	202			-23.19
YARD TRACK	226	428	52.32	-34.30
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		197	24.08	-10.45
MISCELLANEOUS		38	4.65	-13.64
TOTAL		818	100.00	-28.37

Note: 284 of the 428 Derailments (66.35%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $350 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1952	1226	-9.59	$3,723,931	-14.01
1953	1142	-6.85	4,276,666	+14.84
1954	818	-28.37	3,652,410	-14.60

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE *
	1952	1953	1954		1952	1953	1954	
EMPLOYEES	33	24	15	-37.50	1442	1445	1029	-28.79
PASSENGERS	5	21	2	-90.47	125	216	136	-37.04
TRESPASSERS	55	49	38	-22.45	29	42	34	-19.05
OTHERS **	53	58	41	-29.31	255	236	221	- 6.36
TOTALS	146	152	96	-36.84	1851	1939	1420	-26.77

* Comparison of 1954 with 1953
** Others consist chiefly of travelers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen		11		1.07
Road Firemen		22		2.14
Road Conductors	1	71	6.66	6.90
Road Brakemen	3	116	20.00	11.27
Road Flagmen		26		2.53
Road Baggagemen		4		.39
Yard Enginemen and Firemen		37		3.60
Yard Brakemen and Conductors	3	570	20.00	55.39
Yard Switch Tenders		2		.19
Crossing Watchmen		1		.10
Track Walkers				
Sectionmen and Work Train Laborers	6	58	40.00	5.64
Signalmen and Signal Maintainers		8		.78
Station Baggagemen		3		.29
Car Cleaners		1		.10
Car Inspectors		12		1.17
Car Repairmen		9		.87
Carpenters		4		.39
Dining Car Employees		41		3.98
Miscellaneous	1	24	6.67	2.33
Employees Not on Duty	1	9	6.67	.87
TOTAL	15	1029	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30											12	10.08
31 - 40					11	50.00		14	19.44	2	33	29.42
41 - 50		1	9.09		2	9.09		11	15.28	1	19	16.81
51 - 60		4	36.37		7	31.82		22	30.56		35	29.41
61								2	2.78		1	.84
62		2	18.18					5	6.94		3	2.52
63		1	9.09					1	1.39		3	2.52
64								3	4.17		2	1.68
65		1	9.09					5	6.94		1	.84
Over 65		2	18.18				1	8	12.50		3	2.52
Not Reported					2	9.09					4	3.36
TOTAL		11	100.00	-	22	100.00	1	71	100.00	3	116	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		3	11.53		2	5.41	1	80	14.13	1	97	11.39
31 - 40		6	23.07		10	27.03		198	34.55	2	272	31.86
41 - 50		2	7.69		10	27.03		100	17.45	1	145	16.97
51 - 60		10	38.46		9	24.31	1	114	20.07	1	201	23.49
61					1	2.70		8	1.40		12	1.40
62		1	3.85					11	1.92		22	2.56
63		1	3.85					10	1.75		16	1.86
64		1	3.85					6	1.05		12	1.40
65					1	2.70		4	.70		12	1.40
Over 65		1	3.85		2	5.41	1	10	1.92	2	26	3.25
Not Reported		1	3.85		2	5.41		29	5.06		38	4.42
TOTAL	-	26	100.00	-	37	100.00	3	570	100.00	7	853	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
24	Collision of cars		3		82										85		2.69
809	Collision of car and vehicle		13		315			4	758		8		23	4	1117	14.81	35.32
222	Struck by car	2	1	4	7	2	1		1	13	189		4	21	203	77.78	6.42
10	Derailment of car		1		13				1		1				16	-	0.50
5	Contact with overhead or side obst.				8										8		0.25
-	Contact with trolley or feed wire or third rail																
39	Sudden stop		3		36										39		1.23
49	Defect or failure of roadway or eqp.		4		45										49		1.55
228	Caught by doors				229										229		7.24
101	Boarding standing car		1		100										101		3.19
330	Alighting from car		6		325										331		10.46
501	Falling within car				505										505		15.97
4	Jumping on or off car while in motion						4								4		0.13
285	At elevated or subway platforms				283						1		1		285		9.01
31	Repair work on right of way		31												31		0.98
53	Struck by flying missile, glass, etc.		8		52						2				62		1.96
99	Miscellaneous		38		47	2	1		1		8		3	2	98	7.41	3.10
2790	TOTAL	2	109	4	2047	4	6	4	761	13	209	-	31	27	3163		
	Per Cent Killed	7.41		14.81		14.81		14.81		48.16						100.00	
	Per Cent Injured		3.44		64.72		0.19		24.06		6.61		0.98				100.00

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1954 WITH 1953	YEAR			COMPARISON OF 1954 WITH 1953
	1952	1953	1954		1952	1953	1954	
Employees	4	1	2	+100.00%	116	119	109	- 8.40%
Passengers	7	3	4	+ 33.33%	2277	2160	2047	- 5.23%
Trespassers	5	1	4	+300.00%	13	20	6	-70.00%
Occupants of other vehicles	13	8	4	- 50.00%	957	1091	761	-30.25%
Pedestrians	14	17	13	- 23.53%	260	275	209	-24.00%
Others	-	-	-	-	30	28	31	+10.71%
TOTAL	43	30	27	- 10.00%	3653	3693	3163	-14.35%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1102	Collision with other vehicle	3	209	2	912				5	11	542		2	16	1670	53.34	65.16
15	Collision with fixed object		3		40				1						44		1.72
91	Struck by auto-bus, taxicab or truck				2			9	68		1	1	20	10	91	33.33	3.55
164	Running or walking into side of auto-bus, taxicab or truck				9			2	154					2	163	6.67	6.36
211	Boarding or alighting (standing vehicle)		5	1	205									1	210	3.33	8.19
112	Falling within vehicle				112										112		4.37
54	Caught by vehicle doors				54										54		2.11
5	Jumping on or off vehicle in motion				3		2								5		.19
127	Sudden stop of vehicle				131										131		5.11
5	Defect or failure of equipment				9										9		.35
8	Vehicle skidded	1	4		18									1	22	3.33	.86
1	Highway defect				1										1		.04
-	Apparent reckless operation of vehicle																
49	Miscellaneous		21		21				1		3		5		51		1.99
1944	TOTAL	4	242	3	1517	-	2	11	229	11	546	1	27	30	2563		
	Per Cent Killed	13.33		10.00				36.67		36.67		3.33				100.00	
	Per Cent Injured		9.44		59.19		.08		8.93		21.30		1.06				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	721	903	4	1254	307	$185,749.12
Schedule Route (Bus Service)	447	911	12	1144	358	207,140.64
Group and Party (Bus Service)	315	9	1	8	3	2,450.00
Freight and Merchandise (Truck)	6167	96	13	123	83	138,413.39
Contract Carrier (Persons and Property)	593	25	-	34	28	44,399.00
TOTAL	8243	1944	30	2563	779	$578,152.35

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

		CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
YEAR	NUMBER OF REGULATED OPERATORS	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1952	8910	2369	- 7.67%	30	-14.28%	2487	+ 3.58%	$532,860.98	-18.30%
1953	8594	2462	+ 3.92%	37	+23.33%	2424	- 2.53%	663,864.84	+24.58%
1954	8243	2723	+10.60%	30	-18.92%	2563	+ 5.73%	578,152.35	-12.91%

Note: Only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
2	Asphyxiation							2	3	2	3	5.3	0.5
30	Automobile accident	3	23				8			3	31	7.9	5.5
11	Burns - not from electric source		9				3				12		2.2
8	Defect or failure of equipment or machines		8								8		1.5
-	Drowning												
49	Electric - Contact with charged wires or equipment	5	16	1	2	16	19			22	37	57.9	6.6
6	Explosion	2	3					1	6	3	9	7.9	1.6
-	Failure to use protective devices provided												
179	Falling - (Other than in water)	5	170						4	5	174	13.1	31.0
59	Handling materials		59								59		10.5
5	Infection from minor wounds		5								5		0.9
44	Involving use of tools - no defect		45								45		8.0
58	Miscellaneous		59				1				60		10.7
121	Striking against or struck by object	3	116				2			3	118	7.9	21.0
572	TOTAL	18	513	1	2	16	33	3	13	38	561		
	Per Cent Killed	47.4		2.6		42.1		7.9				100.0	
	Per Cent Injured		91.4		0.4		5.9		2.3				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	1952	1953	1954	COMPARISON OF 1954 WITH 1953	1952	1953	1954	COMPARISON OF 1954 WITH 1953
Employees	6	15	18	+20.0%	550	490	513	+ 4.7%
Trespassers	1	1	1	-		5	2	-60.0%
Others	25	25	16	-36.0%	50	32	33	+ 3.1%
Patrons or Consumers	1	7	3	-57.1%	6	6	13	+116.7%
TOTAL	33	48	38	-20.8%	606	533	561	+ 5.25%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
14	Automobile accident	2	13							2	13	6.2	3.7
1	Burns - not from electric source		1								1		0.3
3	Defect or failure of equipment or machinery		3								3		0.9
-	Drowning												
46	Electric - Contact with charged wires or equipment	4	14	1	2	16	19			21	35	65.7	10.1
3	Explosion	2	3						2	2	5	6.2	1.4
-	Failure to use protective devices provided												
106	Falling - (Other than in water)	4	102							4	102	12.5	29.3
29	Handling materials		29								29		8.3
4	Infection from minor wounds		4								4		1.1
35	Involving use of tools - no defect		35								35		10.1
39	Miscellaneous		41								41		11.8
83	Striking against or struck by objects	3	80							3	80	9.4	23.0
363	TOTAL	15	325	1	2	16	19	-	2	32	348		
	Per Cent Killed	46.9		3.1		50.0						100.0	
	Per Cent Injured		93.4		0.6		5.4		0.6				100.0

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1952	4	353	1		17	25	-	1	22	379
1953	11	320	1	3	24	25	-	-	36	348
1954	15	325	1	2	16	19	-	2	32	348

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
2	Asphyxiation							2	3	2	3	66.7	3.7
3	Automobile Accident		3								3		3.7
6	Burns - not from electric source		4				3				7		8.5
3	Defect or failure of equipment or machine		3								3		3.7
-	Drowning												
-	Electric - Contact with charged wires or equipment												
3	Explosion							1	4	1	4	33.3	4.9
-	Failure to use protective devices provided												
23	Falling - (Other than in water)		23								23		28.0
12	Handling materials		12								12		14.6
	Infection from minor wounds												
5	Involving use of tools - no defect		6								6		7.3
7	Miscellaneous		7								7		8.5
14	Striking against or struck by objects		14								14		17.1
78	TOTAL		72	-	-	-	3	3	7	3	82		
	Per Cent Killed							100.0				100.0	
	Per Cent Injured		87.8				3.7		8.5				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1952	1	82	-	-	8	15	1	4	10	101
1953	2	58	-	-	-	-	6	6	8	64
1954	-	72	-	-	-	3	3	7	3	82

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
2	Automobile accident	1	1							1	1	100.0	3.0
3	Burns - not from electric source		3								3		9.1
2	Defect or failure of equipment or machines		2								2		6.1
-	Drowning												
1	Electric - Contact with charged wires or equipment		1								1		3.0
-	Explosion												
-	Failure to use protective devices provided												
4	Falling (Other than in water)		4								4		12.1
6	Handling materials		6								6		18.2
1	Infection from minor wounds		1								1		3.0
3	Involving use of tools - no defect		3								3		9.1
4	Miscellaneous		4								4		12.1
8	Striking against or struck by objects		8								8		24.3
34	TOTAL	1	33	-	-	-	-	-	-	1	33		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1952	1	22	-	-	-	-	-	-	1	22
1953	-	24	-	-	-	-	-	-	-	24
1954	1	33	-	-	-	-	-	-	1	33

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
11	Automobile accident		6				8				14		14.4
1	Burns - not from electric source		1								1		1.0
-	Defect or failure of equipment or machines												
-	Drowning												
2	Electric - Contact with charged wires or equipment	1	1							1	1	50.0	1.0
-	Explosion												
-	Failure to use protective devices provided												
45	Falling - (Other than in water)	1	40						4	1	44	50.0	45.4
12	Handling materials		12								12		12.4
-	Infection from minor wounds												
1	Involving use of tools - no defects		1								1		1.0
8	Miscellaneous		7				1				8		8.3
16	Striking against or struck by objects		14				2				16		16.5
96	TOTAL	2	82	-	-	-	11	-	4	2	97		
	Per Cent Killed	100.0										100.0	
	Per Cent Injured		84.6				11.3		4.1				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1952	-	89	-	-	-	10	-	1	-	100
1953	2	86	-	2	1	8	1	-	4	96
1954	2	82	-	-	-	11	-	4	2	97

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
-	Automobile accident												
-	Burns - not from electric source												
-	Defect or failure of equipment or machines											-	
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
1	Falling - (Other than in water)		1								1		100.0
-	Handling materials												
-	Infection from minor wounds												
-	Involving use of tools - no defects												
-	Miscellaneous												
-	Striking against or struck by objects												
1	TOTAL	-	1	-	-	-	-	-	-	-	1		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1952	-	4	-	-	-	-	-	-	-	4
1953	-	1	-	-	-	-	-	-	-	1
1954	-	1	-	-	-	-	-	-	-	1

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipelines and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1952 and 1953

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1954 WITH 1953	YEAR			COMPARISON OF 1954 WITH 1953	YEAR			COMPARISON OF 1954 WITH 1953
	1952	1953	1954		1952	1953	1954		1952	1953	1954	
Steam Railroad	1853	1859	1409	-24.21%	146	152	96	-36.84%	1851	1939	1420	-26.77%
Street Railway	3054	3066	2790	- 9.00%	43	30	27	-10.00%	3653	3693	3163	-14.35%
Motor Transportation	1751	1766	1944	+10.01%	30	37	30	-18.92%	2487	2424	2563	- 5.73%
Electric	387	365	363	- 0.55%	22	36	32	-11.11%	379	348	348	-
Gas	92	66	78	+18.18%	10	8	3	-62.50%	101	64	82	+28.12%
Water	23	24	34	+41.67%	1	-	1	-	22	24	33	+37.50%
Telephone & Telegraph	97	99	96	- 3.13%	-	4	2	-50.0%	100	96	97	+ 1.03%
Other Utilities	4	1	1	-	-	-	-	-	4	1	1	-
TOTAL	7233*	7210*	6685*	- 7.28%	252	267	191	-28.46%	8562*	8533*	7672*	-10.09%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX

DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals watchmen, etc.	2178	20.63
Protected by trainmen	1594	15.10
Total Protected	3772	35.73
Unprotected (see note)	6785	64.27
TOTAL CROSSINGS	10,557	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	333	8.83
Watchmen	205	5.43
Flashing light signals	1503*	39.85
Other visual signals	38**	1.01
Bells	99	2.62
Trainmen	1594	42.26
TOTAL	3772	100.00

* - Additional protection by short-arm gates at 212 crossings.

**- Includes ten crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	163	56		2		2	163	60	223	54.93
Protected by gates	17	3		1			17	4	21	5.17
Protected by watchmen	10	2					10	2	12	2.95+
Protected by bells	6						6		6	1.48
Protected by visual signals	82	20		7	1	2	83	29	112	27.59-
Protected by trainmen	25	6		1			25	7	32	7.88
Total Accidents at Protected Crossings	140	31		9	1	2	141	42	183	45.07
Total Accidents--Non Casualty	303				1		304			7[illegible].88
Total Accidents--Casualty		87		11		4		102		2[illegible].12
TOTAL ACCIDENTS	390		11		5				406	
Per Cent of Total Accidents	96.06		2.71		1.23					100.00

NC - Non Casualty; C - Casualty
* See "Note" Page 16 under Table A

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	13	82	2			3	15	85	100	64.10
Protected by gates		4	1				1	4	5	3.21
Protected by watchmen	2						2		2	1.28
Protected by bells										
Protected by visual signals	4	26	5	2	1	1	10	29	39	25.00
Protected by trainmen	2	7	1				3	7	10	6.41
TOTAL	21	119	9	2	1	4	31	125	156	100.00
Killed and Injured at protected crossings	8	37	7	2	1	1	16	40	56	
Per Cent of Total Killed & Injured	80.36		16.07		3.57					100.00

K - Killed; I - Injured
* See "Note" Page 16 under Table A

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1952, 1953 and 1954

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1952	2176	23	14.8	
	1953	2179	17	26.1	
	1954	2178	13	23.5	
**UNPROTECTED	1952	8597	17	50.0	
	1953	8450	31		82.4
	1954	8379	18	42.0	
			INJURED		
*PROTECTED	1952	2176	59	9.2	
	1953	2179	52	11.9	
	1954	2178	33	36.6	
**UNPROTECTED	1952	8597	117		39.2
	1953	8450	99	15.4	
	1954	8379	92	7.1	

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED
1952, 1953 and 1954

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1952	161	-13.0%	13	-31.6%	44	-24.1%
		1953	151	- 6.2%	14	+ 7.7%	45	+ 2.3%
		1954	126	-16.6%	12	-14.3%	28	-37.7%
	UNPROTECTED**	1952	139	- 2.8%	5	-44.4%	36	+33.3%
		1953	97	-30.2%	2	-60.0%	28	-22.2%
		1954	109	+12.4%	3	+50.0%	36	+28.6%
RURAL	PROTECTED	1952	56	-33.3%	10	- 9.1%	18	-14.3%
		1953	68	+21.4%	4	-60.0%	14	-22.2%
		1954	57	-16.2%	4	-	12	-14.3%
	UNPROTECTED**	1952	129	-18.4%	12	-45.5%	78	+81.4%
		1953	146	+13.2%	28	+133.3%	64	-17.9%
		1954	114	-21.9%	12	-57.1%	49	-23.4%

* - Cities or boroughs with population over 2,500.
** - See "Note" Page 16 under Table A.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1952, 1953 and 1954

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1952	244	6.5	
	1953	233	4.5	
	1954	217	6.9	
		PERSONS KILLED		
	1952	29		16.0
	1953	36		24.1
	1954	27	25.0	
		PERSONS INJURED		
	1952	104		108.0
	1953	71	31.7	
	1954	63	11.3	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1952	241	22.0	
	1953	229	5.0	
	1954	189	17.5	
		PERSONS KILLED		
	1952	11	69.4	
	1953	12		9.1
	1954	4	66.7	
		PERSONS INJURED		
	1952	72	27.3	
	1953	80		11.1
	1954	62	22.5	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	13	3.20	1	9
1 to 1:59 a.m.	11	2.71		2
2 to 2:59 a.m.	14	3.45		8
3 to 3:59 a.m.	6	1.48		2
4 to 4:59 a.m.	9	2.22		1
5 to 5:59 a.m.	16	3.94		6
6 to 6:59 a.m.	13	3.20	1	8
7 to 7:59 a.m.	15	3.69	4	1
8 to 8:59 a.m.	19	4.68	3	5
9 to 9:59 a.m.	12	2.96	1	1
10 to 10:59 a.m.	19	4.68	2	5
11 to 11:59 a.m.	20	4.93		5
Noon to 12:59 p.m.	21	5.17	2	10
1 to 1:59 p.m.	16	3.94		8
2 to 2:59 p.m.	21	5.17	6	2
3 to 3:59 p.m.	25	6.16	4	3
4 to 4:59 p.m.	20	4.93	1	12
5 to 5:59 p.m.	18	4.43	3	5
6 to 6:59 p.m.	25	6.16	2	4
7 to 7:59 p.m.	21	5.17	1	3
8 to 8:59 p.m.	16	3.94		5
9 to 9:59 p.m.	18	4.43		8
10 to 10:59 p.m.	15	3.69		8
11 to 11:59 p.m.	23	5.67		4
Not Reported				
TOTAL	406	100.00	31	125

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	32	7.88	5	17
Monday	43	10.59	3	16
Tuesday	60	14.78	5	19
Wednesday	66	16.26	3	13
Thursday	68	16.75	7	16
Friday	79	19.46	7	16
Saturday	58	14.28	1	28
TOTAL	406	100.00	31	125

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	39	9.61	2	16
February	39	9.61		8
March	35	8.62	3	9
April	28	6.90	2	5
May	17	4.19	2	1
June	23	5.66	3	11
July	30	7.39	3	5
August	34	8.37	3	9
September	21	5.17	2	14
October	33	8.13	5	18
November	45	11.08	2	16
December	62	15.27	4	13
TOTAL	406	100.00	31	125

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED
1952, 1953 and 1954

CHARACTER OF TRACK	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1952	457	39	171
	1953	416	47	139
	1954	377	31	120
Public Siding	1952	20	1	4
	1953	34	-	12
	1954	26	-	5
Private Siding	1952	8	-	1
	1953	12	1	-
	1954	3	-	-
Private Grade Crossing (Private Road)	1952	54	8	16
	1953	51	8	13
	1954	52	5	15

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1952, 1953 and 1954

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1952	108	31	124
	1953	117	44	135
	1954	87	21	119
Pedestrians	1952	11	4	7
	1953	7	4	3
	1954	11	9	2
Streetcars Autobuses Taxicabs	1952	2	4	45
	1953	3	-	12
	1954	2	-	3
Bicycles Motorcycles Wagons	1952	1	1	-
	1953	3	-	1
	1954	2	1	1

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES
1952, 1953 and 1954

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1952	206	9.3	
	1953	166	19.4	
	1954	163	1.8	
Protected	1952	157	21.1	
	1953	168		7.0
	1954	141	16.1	

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	1	1	.15
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	
Auto driven through lowered gates and struck by engine or train	-	-	2	.29
Auto stalled on crossing and struck by engine or train	-	-	11	1.60
Auto struck by engine or train - gates not lowered	-	1	6	.87
Auto struck by engine or train - gates out of order	-	-	-	
Auto driven into side of moving train - gates out of order	-	-	-	
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	16	88	205	29.84
Auto driven into side of engine or train moving over crossing	3	25	92	13.39
Auto driven into side of engine or train standing on crossing	-	2	12	1.75
Auto stalled on crossing and struck by engine or train	2	5	63	9.17
Total Accidents Involving Contact between Train and Auto	21	122	392	57.06
Auto colliding with crossing gates - No contact with train	-	-	245	35.66
Auto colliding with flashing light signal installations-No contact with trains	-	4	50	7.28
Total Accidents Involving Automobiles at Grade Crossings	21	126	687	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	38	23	12	21	15.02
Passenger train - reverse movement					
Freight train - normal movement	213	65	17	86	68.47
Freight train - reverse movement	1	1		1	.49
Freight train - car ahead of engine	3				.74
Switching movement - engine normal ahead of draft	21	4		4	6.16
Switching movement - engine reverse ahead of draft	5				1.23
Switching movement - engine pushing cars	6				1.48
Light engine - normal movement	14	5		6	4.68
Light engine - reverse movement					
Motor track cars	3	3		5	1.48
Cars not attached		1	2	2	.25
TOTAL	304	102	31	125	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1952, 1953 and 1954

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	375	1952	289*	0.771	-	17
	365	1953	272*	0.745	1	4
	333	1954	266*	0.799	1	4
Watch-man	262	1952	32	0.122	1	10
	243	1953	27	0.111	5	10
	205	1954	12	0.058	2	-
Bells	113	1952	6	0.053	-	-
	108	1953	2	0.018	-	-
	99	1954	6	0.061	-	-
Visual Signals	1426	1952	165*	0.116	17	38
	1463	1953	174*	0.118	10	32
	1541	1954	162*	0.105	10	33
Train-men	1506	1952	31	0.021	-	3
	1579	1953	35	0.022	1	7
	1594	1954	32	0.020	3	7

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAINS AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1952	9	-	7
	1953	5	-	1
	1954	6	-	3
Gates out of order	1952	2	-	2
	1953	1	-	-
	1954	-	-	-
Persons passing under or around lowered gates	1952	4	2	2
	1953	2	-	2
	1954	1	1	-
Automobile driven through lowered gates striking or being struck by train	1952	6	-	1
	1953	6	1	2
	1954	3	-	1
Unassigned	1952	8	-	-
	1953	4	-	1
	1954	11	-	-

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1952, 1953 and 1954

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1952	260	-	
	1953	253	2.7	
	1954	245	3.2	
Flashing light signals struck and damaged	1952	37	9.8	
	1953	35	5.4	
	1954	50		42.9

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1945-1954

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1945	25	5	6
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8
1951	27	4	4
1952	20	-	8
1953	13	1	5
1954	10	-	2

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	183	71	23	83	62.56
Cloudy	78	18	5	24	23.65
Fog	6	1		1	1.72
Rain	21	4		6	6.16
Snow	16	8	3	11	5.91
TOTAL	304	102	31	125	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	10	2		2	2.96
1 - 5	103	19	3	27	30.05
6 - 10	54	14		21	16.75
11 - 20	57	24	4	35	19.95
21 - 30	44	18	10	22	15.27
31 - 40	20	10	4	8	7.39
41 - 50	8	7	3	5	3.69
51 - 60	3	4	4	1	1.72
61 - 70	2				.49
Over 70		3	3	1	.74
Not Reported	3	1		3	.99
TOTAL	304	102	31	125	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles Only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	203	66	12	89	68.10
Wet	60	9	6	8	17.47
Muddy	1				.25
Snowy	14	10	3	13	6.08
Icy	15	2	1	6	4.30
Not Reported	11	4		7	3.80
TOTAL	304	91	22	123	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	46	5	17	11.65
21 - 30	56	3	20	14.18
31 - 40	46	3	22	11.65
41 - 50	37	4	25	9.37
51 - 60	39	4	20	9.87
Over 60	18		1	4.55
Not Reported	153	3	18	38.73
TOTAL	395	22	123	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	360	19	112	91.14
Female	29	3	11	7.34
Not Reported	6			1.52
TOTAL	395	22	123	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	294	16	103	74.43
Not Familiar	21		3	5.32
Not Reported	80	6	17	20.25
TOTAL	395	22	123	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	4		1	.99
Allegheny	34	2	3	8.37
Armstrong	5			1.23
Beaver	1	1	1	.25
Bedford	1			.25
Berks	9	3	4	2.22
Blair	3		2	.74
Bradford				
Bucks	3			.74
Butler	5		1	1.23
Cambria	9		8	2.22
Cameron	3			.74
Carbon	2		1	.49
Centre	2		4	.49
Chester	6	2	3	1.47
Clarion	3	1		.74
Clearfield	8		2	1.97
Clinton	6		2	1.47
Columbia	3		1	.74
Crawford	6		5	1.47
Cumberland	8	1		1.97
Dauphin	3		1	.74
Delaware	15	3	4	3.70
Elk	1			.25
Erie	18	2	3	4.43
Fayette	8		1	1.97
Forest				
Franklin	7			1.72
Fulton				
Greene				
Huntingdon	1			.25
Indiana	10		1	2.46
Jefferson	4	1	6	.99
Juniata				

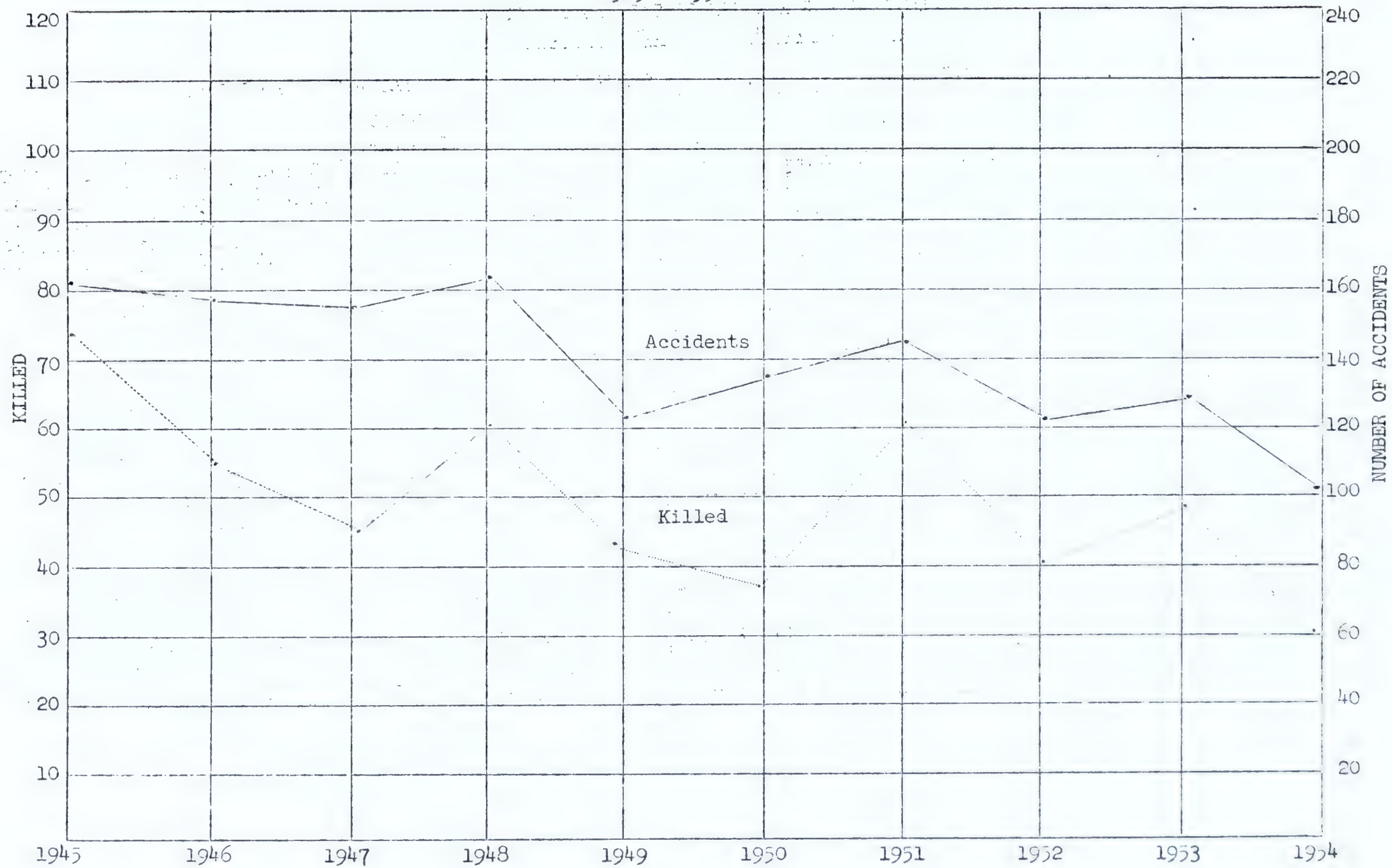
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	14	2	10	3.45
Lancaster	9	1	4	2.22
Lawrence				
Lebanon	8		5	1.97
Lehigh	2		1	.49
Luzerne	17		4	4.19
Lycoming	8		2	1.97
McKean	4		1	.99
Mercer	21	1	3	5.17
Mifflin	2			.49
Monroe				
Montgomery	14	3	6	3.45
Montour	2			.49
Northampton	7		2	1.72
Northumberland	7		5	1.72
Perry				
Philadelphia	14		5	3.45
Pike	1			.25
Potter				
Schuylkill	9		5	2.22
Snyder				
Somerset	7	1		1.72
Sullivan				
Susquehanna	4		2	.99
Tioga	2			.49
Union	2			.49
Venango	4		1	.98
Warren	1			.25
Washington	19		6	4.68
Wayne	1		3	.25
Westmoreland	20	5	2	4.93
Wyoming				
York	19	2	4	4.68
TOTAL	406	31	125	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1945 - 1954

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS			MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1945	11,009	579	73	175	2,060,546	2.81
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73
1951	10,812	570	61	149	3,338,059	1.71
1952	10,773	485	40	176	3,409,844	1.42
1953	10,629	462	48	151	3,455,695	1.34
1954	10,557	406	31	125	3,564,318	1.14

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA 1945 - 1954



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
727	Collision with other vehicle		166	2	690				1		218		1	2	1076	50.00	85.80
3	Collision with fixed object				4										4		.32
24	Struck by taxicab				1			2	9				14	2	24	50.00	1.91
132	Running or walking into side of taxicab				9				123						132		10.53
-	Boarding or alighting (Standing vehicle)				1										1		.08
1	Falling within vehicle																
5	Caught by vehicle doors				5										5		.40
-	Jumping on or off vehicle in motion																
9	Sudden stop of vehicle				10										10		.80
-	Defect or failure of equipment																
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operating of vehicle																
2	Miscellaneous				2										2		.16
903	TOTAL	-	166	2	722	-	-	2	133	-	218	-	15	4	1254		
	Per Cent Killed			50.00				50.00								100.00	
	Per Cent Injured		13.24		57.58				10.60		17.38		1.20				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
277	Collision with other vehicle	1	31		217				1	1	214			2	463	16.67	40.47
10	Collision with fixed object				35				1						37		3.23
58	Struck by autobus				1			6	50		1	1	6	7	58	58.33	5.07
28	Running or walking into side of autobus							2	27					2	27	16.67	2.36
211	Boarding or alighting (Standing Vehicle)		5	1	205									1	210	8.33	18.36
110	Falling within vehicle				110										110		9.61
49	Caught by vehicle doors				49										49		4.28
5	Jumping on or off vehicle in motion				3		2								5		.44
118	Sudden stop of vehicle				121										121		10.58
5	Defect or failure of equipment				9										9		.79
5	Vehicle skidded		2		18										20		1.75
1	Highway defect				1										1		.09
-	Apparent reckless operation of vehicle																
34	Miscellaneous		12		19				1				2		34		2.97
911	TOTAL	1	51	1	788	-	2	8	80	1	215	1	8	12	1144		
	Per Cent Killed	8.33		8.33				66.68		8.33		8.33				100.00	
	Per Cent Injured		4.46		68.88		0.18		6.99		18.79		0.70				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
6	Collision with other vehicle				3						3				6		
-	Collision with fixed object																
1	Struck by autobus							1						1		100.0	75.0
1	Running or walking into side of autobus								1						1		12.5
-	Boarding or alighting (Standing vehicle)																
1	Falling within vehicle				1										1		12.5
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operation of vehicle																
-	Miscellaneous																
9	TOTAL	-	-	-	4	-	-	1	1	-	3	-	-	1	8		
	Per Cent Killed							100.0								100.0	
	Per Cent Injured				50.0				12.5		37.5						100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
73	Collision with other vehicles	2	8		1				3	10	86		1	12	99	92.31	80.5
2	Collision with fixed object		2		1										3		2.4
7	Struck by truck								8						8		6.5
2	Running or walking into side of truck								2						2		1.6
-	Boarding or alighting (Standing Vehicle)																
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
2	Vehicle skidded	1	1											1	1	7.69	0.8
-	Highway defect																
-	Apparent reckless operation of vehicle																
10	Miscellaneous		8										2		10		8.2
96	TOTAL	3	19	-	2	-	-	-	13	10	86	-	3	13	123		
	Per Cent Killed	23.1								76.9						100.0	
	Per Cent Injured		15.4		1.6				10.6		70.0		2.4				100.0

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
19	Collision with other vehicle		4		1						21				26		76.6
-	Collision with fixed object																
1	Struck by taxicab, autobus or truck								1						1		2.9
1	Running or walking into side of taxicab, autobus or truck								1						1		2.9
-	Boarding or alighting (Standing vehicle)																
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
1	Vehicle skidded		1												1		2.9
-	Highway defect																
-	Apparent reckless operation of vehicle																
3	Miscellaneous		1								3		1		5		14.7
25	TOTAL	-	6	-	1	-	-	-	2	-	24	-	1	-	34		
	Per Cent Killed																
	Per Cent Injured		17.7		2.9				5.9		70.6		2.9				100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1952	2	105	-	446	-	-	1	159	-	123	-	8	3	841
1953	2	101	-	570	-	-	1	124	-	143	-	4	3	942
1954	-	166	2	722	-	-	2	133	-	218	-	15	4	1254

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1952	1	38	6	1114	-	-	3	100	3	281	-	12	13	1545
1953	-	62	5	912	-	2	6	92	3	238	-	7	14	1313
1954	1	51	1	788	-	2	8	80	1	215	1	8	12	1144

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1952	-	1	-	6	-	-	-	2	-	2	-	1	-	12
1953	-	-	-	9	-	-	-	-	-	-	-	-	-	9
1954	-	-	-	4	-	-	1	1	-	3	-	-	1	8

K - Killed; I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1952	-	14	-	5	-	-	1	5	11	40	-	1	12	65
1953	-	24	1	2	-	-	3	8	14	83	-	1	18	118
1954	3	19	-	2	-	-	-	13	10	86	-	3	13	123

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1952	-	3	-	8	-	-	-	3	2	10	-	-	2	24
1953	-	12	-	2	-	-	1	-	1	28	-	-	2	42
1954	-	6	-	1	-	-	-	2	-	24	-	1	-	34

K - Killed; I - Injured

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

1955

Record of Accidents Involving the Facilities
or Operations of Transportation and Service
Utilities and Contract Carriers

Harrisburg, Pennsylvania
August 6, 1956

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
August 6, 1956

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors Isenberg and Johnson

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1955.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1955 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirement:

Steam Railroads	58	Canal	1
Street Railways	6	Electric	29
Ferries	12	Gas (Artificial)	28
Motorboats	11	Gas (Natural)	68
Steamboats	1	Pipe Lines	5
Express	1	Sewerage	19
Bus - Scheduled Service	432	Steam Heat	22
Bus - Group and Party	312	Telegraph	2
Taxi - Call and Demand	710	Telephone	124
Truck - Common Carrier	5493	Water	490
Airways	35	Wharfage	3
Incline Plane	3		
Stock Yards	2		

Total Transportation Utilities	7,076
Total Service Utilities	791
Total	7,867

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 508 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $350 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1955 there was a decrease in casualty accidents involving all transportation utilities, while accidents involving service utilities showed an increase. The summary which includes all utilities indicates that the total number of accidents decreased 5.91% during the year and that the number of fatalities was increased 11.52% during the same period.

The attached report is submitted for the consideration of the Commission.

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INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1591	117	1555	25.24	54.93	20.78
Street Railway	2279	24	2656	36.15	11.27	35.49
Motor Transportation	1810	41	2661	28.71	19.25	35.56
Electric	388	28	372	6.16	13.14	4.97
Gas	80	3	82	1.27	1.41	1.10
Water	34	-	34	0.54	-	.45
Telephone & Telegraph	118	-	120	1.87	-	1.60
Other Utilities	4	-	4	.06	-	.05
TOTAL	6290*	213	7466*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	23	1236		113	4	150	10	352	2	75		34		115		4	39	2079	18.31	27.78
Trespasser	50	18	2	4		1	5	1									57	24	26.76	0.32
Other	42	158		8	3	19	13	19	1	2				4			59	210	27.70	2.80
Passenger, Patron or Consumer	2	143	7	1631	2	1563				5				1			11	3343	5.16	44.67
Pedestrian			10	159	7	206											17	365	7.98	4.88
Occupant Other Vehicle			5	741	25	722											30	1463	14.09	19.55
TOTAL	117	1555	24	2656	41	2661	28	372	3	82	-	34	-	120	-	4	213	7466*		
Per Cent Killed	54.93		11.27		19.25		13.14		1.41		-		-		-				100.00	
Per Cent Injured		20.78		35.49		35.56		4.97		1.10		0.45		1.60		0.05				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
126	Grade Crossings (for details-see appendix)							40	130	40	130	34.19	8.36
14	Collisions	3	22		3				1	3	26	2.56	1.67
3	Derailments		5								5		.32
66	At station or loading platform		27	1	36				2	1	65	0.86	4.18
3	Defect or failure of roadway or equipment		3								3		.19
72	Operating switches		72								72		4.63
44	Struck overhead or side obstruction	4	38			1			1	5	39	3.41	2.51
45	Repairing track or roadbed		46								46	0.86	2.96
23	Struck by flying missile, glass, etc.		19		5						24		1.54
105	Coupling or uncoupling	1	104							1	104	0.86	6.69
36	Falling on locomotive or car		25		9		1		1		36		2.32
98	Falling from locomotive or car		88	1	6	1	1		1	2	96	1.71	6.17
298	Getting on or off locomotive or car		250		47		2				299		19.23
104	Struck by locomotive or car	11	24		4	46	12	2	5	59	45	50.42	2.89
116	Operating hand brakes		115		1						116		7.46
193	Sudden starting or stopping of trains		179		17		1		11		208		13.38
3	Coming in contact with catenary wire	1	2							1	2	0.86	.13
13	On or about locomotive		13								13		.84
229	Miscellaneous	3	204	-	15	2	1	-	6	5	226	4.27	14.53
1591	TOTAL	23	1236	2	143	50	18	42	158	117	1555		
	Per Cent Killed	19.66		1.71		42.73		35.90				100.00	
	Per Cent Injured		79.49		9.20		1.15		10.16				100.00

* - "Others" consist chiefly of travelers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $350 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	19			+18.75
YARD TRACK	183	202	18.33	+31.65
DERAILMENTS:				
MAIN TRACK	223			+10.39
YARD TRACK	406	629	57.08	+79.65
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		237	21.50	+20.30
MISCELLANEOUS		34	3.09	-10.52
TOTAL		1102	100.00	+34.72

Note: 304 of the 629 Derailments (48.33%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $350 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1953	1142	-6.85	$4,276,666	+14.84
1954	818	-28.37	$3,652,410	-14.60
1955	1102	+34.72	$3,697,802	+1.24

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE *	INJURED			% INCREASE OR DECREASE *
	1953	1954	1955		1953	1954	1955	
EMPLOYEES	24	15	23	+53.33	1445	1029	1236	+20.12
PASSENGERS	21	2	2	-	216	136	143	+5.15
TRESPASSERS	49	38	50	+31.58	42	34	18	-47.06
OTHERS **	58	41	42	+2.40	236	221	158	-28.51
TOTALS	152	96	117	+21.87	1939	1420	1555	+9.51

* Comparison of 1955 with 1954
** Others consist chiefly of travelers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen	2	20	8.69	1.62
Road Firemen	2	23	8.69	1.86
Road Conductors		68		5.50
Road Brakemen	1	135	4.35	10.92
Road Flagmen		17		1.38
Road Baggagemen		2		0.16
Yard Enginemen and Firemen	1	51	4.35	4.13
Yard Brakemen and Conductors	9	727	39.13	58.82
Yard Switch Tenders		10		0.81
Crossing Watchmen				
Track Walkers				
Sectionmen and Work Train Laborers	3	63	13.05	5.10
Signalmen and Signal Maintainers	1	7	4.35	0.57
Station Baggagemen		3		0.24
Car Cleaners		3		0.24
Car Inspectors	1	5	4.35	0.40
Car Repairmen	1	7	4.35	0.57
Carpenters		2		0.16
Dining Car Employees		35		2.83
Miscellaneous	2	58	8.69	4.69
Employees Not on Duty				
TOTAL	23	1236	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21												
21 - 30		1	4.55		3	12.00					14	10.29
31 - 40		2	9.09	2	15	68.00		14	20.59		48	35.29
41 - 50		2	9.09		4	16.00		11	16.18		30	22.06
51 - 60	1	10	50.00					23	33.83		28	20.59
61								2	2.94		1	0.74
62		1	4.55					4	5.88	1		0.74
63								2	2.94		3	2.20
64	1	1	9.09					3	4.41			
65												
Over 65		2	9.08					6	8.82		4	2.94
Not Reported		1	4.55		1	4.00		3	4.41		7	5.15
TOTAL	2	20	100.00	2	23	100.00	-	68	100.00	1	135	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21								2	0.27		2	0.19
21 - 30		4	23.53		2	3.85	1	140	19.16	1	164	15.63
31 - 40		1	5.88		14	26.93		273	37.09	2	367	34.94
41 - 50		5	29.41		8	15.38	2	119	16.44	2	179	17.14
51 - 60		3	17.65		10	19.23	1	88	12.09	2	162	15.53
61					1	1.92		9	1.23		13	1.23
62					2	3.85		5	0.68	1	12	1.23
63					2	3.85		5	0.68		12	1.14
64		1	5.88	1	3	7.69		12	1.63	2	20	2.08
65					5	9.61	1	4	0.68	1	9	0.85
Over 65		1	5.88		1	1.92	1	13	1.90	1	27	2.65
Not Reported		2	11.77		3	5.77	3	57	8.15	3	74	7.29
TOTAL	-	17	100.00	1	51	100.00	9	727	100.00	15	1041	100.00

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
15	Collision of cars		4		35										39		1.47
669	Collision of car and vehicle		30		215			4	739	1	2		6	5	992	20.83	37.35
195	Struck by car		3	3	37	2	2			9	145			14	187	58.33	7.04
6	Derailment of car				12			1	1					1	13	4.17	0.49
6	Contact with overhead or side obst.		1		4						1				6		0.23
1	Contact with trolley or feed wire or third rail				1										1		0.04
72	Sudden stop		2		70						4				76		2.86
16	Defect or failure of roadway or eqp.				15				1						16		0.60
128	Caught by doors		1		127										128		4.82
110	Boarding standing car		5		105										110		4.14
249	Alighting from car		4		246										250		9.41
348	Falling within car		3		348										351		13.21
1	Jumping on or off car while in motion				1										1		0.04
309	At elevated or subway platforms		1	4	306						1		1	4	309	16.67	11.63
14	Repair work on right of way		14												14		0.53
69	Struck by flying missile, glass, etc.		4		66						2		1		73		2.75
80	Miscellaneous		41		43		2				4				90		3.39
2279	TOTAL		113	7	1631	2	4	5	741	10	159		8	24	2656		
	Per Cent Killed			29.17		8.33		20.83		41.67						100.00	
	Per Cent Injured		4.25		61.41		0.15		27.90		5.99		0.30				100.00

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1955 WITH 1954	YEAR			COMPARISON OF 1955 WITH 1954
	1953	1954	1955		1953	1954	1955	
Employees	1	2	-	- 100.00%	119	109	113	+ 3.67%
Passengers	3	4	7	+ 75.00%	2160	2047	1631	- 20.32%
Trespassers	1	4	2	- 50.00%	20	6	4	- 33.33%
Occupants of other vehicles	8	4	5	+ 25.00%	1091	761	741	- 2.63%
Pedestrians	17	13	10	- 23.08%	275	209	159	- 23.92%
Others	-	-	-	-	28	31	8	- 74.19%
TOTAL	30	27	24	- 11.11%	3693	3163	2656	- 16.03%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1106	Collision with other vehicle	3	134	1	1059				6	25	722		1	29	1922	70.73	72.23
12	Collision with fixed object	1	1	1	33								1	2	35	4.88	1.32
122	Struck by auto-bus, taxicab or truck				3			6	100			3	16	9	119	21.95	4.47
99	Running or walking into side of auto-bus, taxicab or truck				7			1	100					1	107	2.44	4.02
173	Boarding or alighting (standing vehicle)				174										174		6.54
80	Falling within vehicle				80										80		3.01
50	Caught by vehicle doors				50										50		1.88
3	Jumping on or off vehicle in motion				2		1								3		.11
115	Sudden stop of vehicle				121										121		4.55
3	Defect or failure of equipment				3										3		.11
10	Vehicle skidded		3		7										10		.37
4	Highway defect				4										4		.15
-	Apparent reckless operation of vehicle																
33	Miscellaneous		12		20								1		33		1.24
1810	TOTAL	4	150	2	1563	-	1	7	206	25	722	3	19	41	2661		
	Per Cent Killed	9.76		4.88				17.07		60.97		7.32				100.00	
	Per Cent Injured		5.64		58.74		.04		7.74		27.13		.71				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	710	899	6	1416	281	$179,085.58
Schedule Route (Bus Service)	432	787	10	1095	357	259,329.07
Group and Party (Bus Service)	312	3	-	5	4	3,200.00
Freight and Merchandise (Truck)	5493	102	22	120	108	123,543.19
Contract Carrier (Persons and Property)	508	19	3	25	48	44,208.50
TOTAL	7455	1810	41	2661	798	$609,866.34

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1953	8594	2462	- 3.92%	37	+23.33%	2424	- 2.53%	$663,864.84	+24.58%
1954	8243	2723	+10.60%	30	-18.92%	2563	+ 5.73%	578,152.35	-12.91%
1955	7455	2608	- 4.22%	41	+36.67%	2661	+ 3.82%	609, 866.34	- 5.48%

Note: Only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
	Asphyxiation												
43	Automobile accident	1	43			2	2			3	45	9.7	7.3
22	Burns - not from electric source		20				7		4		31		5.1
8	Defect or failure of equipment or machines		8								8		1.3
-	Drowning												
52	Electric - Contact with charged wires or equipment	7	18	5	1	11	12			23	31	74.2	5.1
6	Explosion		4			1	1		1	1	6	3.2	1.0
-	Failure to use protective devices provided												
172	Falling - (Other than in water)	1	172						1	1	173	3.2	28.3
95	Handling materials		95								95		15.5
7	Infection from minor wounds		7								7		1.1
55	Involving use of tools - no defect		55								55		9.0
49	Miscellaneous		49								49		8.0
115	Striking against or struck by object	3	109				3			3	112	9.7	18.3
624	TOTAL	12	580	5	1	14	25		6	31	612		
	Per Cent Killed	38.7		16.1		45.2						100.0	
	Per Cent Injured		94.8		0.2		4.0		1.0				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1955 WITH 1954	YEAR			COMPARISON OF 1955 WITH 1954
	1953	1954	1955		1953	1954	1955	
Employees	15	18	12	- 33.3%	490	513	580	+ 13.1%
Trespassers	1	1	5	+400.0%	5	2	1	- 50.0%
Others	25	16	14	- 12.5%	32	33	25	- 24.2%
Patrons or Consumers	7	3	-	-100.0%	6	13	6	- 53.8%
TOTAL	48	38	31	- 18.4%	533	561	612	+ 9.4%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
16	Automobile accident		17			2				2	17	7.1	4.6
14	Burns - not from electric source		13				6				19		5.1
6	Defect or failure of equipment or machinery		6								6		1.6
-	Drowning												
51	Electric - Contact with charged wires or equipment	7	17	5	1	11	12			23	30	82.1	8.1
-	Explosion												
-	Failure to use protective devices provided												
100	Falling - (Other than in water)	1	101							1	101	3.6	27.1
67	Handling materials		67								67		18.0
3	Infection from minor wounds		3								3		0.8
32	Involving use of tools - no defect		32								32		8.6
31	Miscellaneous		31								31		8.4
68	Striking against or struck by objects	2	65				1			2	66	7.2	17.7
388	TOTAL	10	352	5	1	13	19	-	-	28	372		
	Per Cent Killed	35.7		17.9		46.4						100.0	
	Per Cent Injured		94.6		0.3		5.1						100.0

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1953	11	320	1	3	24	25	-	-	36	348
1954	15	325	1	2	16	19	-	2	32	348
1955	10	352	5	1	13	19	-	-	28	372

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
7	Automobile Accident	1	6							1	6	33.0	7.3
7	Burns - not from electric source		6				1		4		11		13.4
1	Defect or failure of equipment or machine		1								1		1.2
-	Drowning												
-	Electric - Contact with charged wires or equipment												
6	Explosion		4			1	1		1	1	6	33.0	7.3
-	Failure to use protective devices provided												
17	Falling - (Other than in water)		17								17		20.8
11	Handling materials		11								11		13.4
1	Infection from minor wounds		1								1		1.2
11	Involving use of tools - no defect		11								11		13.4
4	Miscellaneous		4								4		4.9
15	Striking against or struck by objects	1	14							1	14	34.0	17.1
80	TOTAL	2	75	-	-	1	2	-	5	3	82		
	Per Cent Killed	67.0				33.0						100.0	
	Per Cent Injured		91.5				2.4		6.1				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1953	2	58	-	-	-	-	6	6	8	64
1954	-	72	-	-	-	3	3	7	3	82
1955	2	75	-	-	1	2	-	5	3	82

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
4	Automobile accident		4								4		11.8
-	Burns - not from electric source												
1	Defect or failure of equipment or machines		1								1		2.9
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
8	Falling (Other than in water)		8								8		23.5
8	Handling materials		8								8		23.5
-	Infection from minor wounds												
4	Involving use of tools - no defect		4								4		11.8
2	Miscellaneous		2								2		5.9
7	Striking against or struck by objects		7								7		20.6
34	TOTAL	-	34	-	-	-	-	-	-	-	34		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1953	-	24	-	-	-	-	-	-	-	24
1954	1	33	-	-	-	-	-	-	1	33
1955	-	34	-	-	-	-	-	-	-	34

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
16	Automobile accident		16				2				18		15.0
1	Burns - not from electric source		1								1		0.8
-	Defect or failure of equipment or machines												
-	Drowning												
1	Electric - Contact with charged wires or equipment		1								1		0.8
-	Explosion												
-	Failure to use protective devices provided												
46	Falling - (Other than in water)		45						1		46		38.4
8	Handling materials		8								8		6.7
3	Infection from minor wounds		3								3		2.5
6	Involving use of tools - no defects		6								6		5.0
12	Miscellaneous		12								12		10.0
25	Striking against or struck by objects		23				2				25		20.8
118	TOTAL	-	115	-	-	-	4	-	1	-	120		
	Per Cent Killed												
	Per Cent Injured		95.8				3.4		0.8				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1953	2	86	-	2	1	8	1	-	4	96
1954	2	82	-	-	-	11	-	4	2	97
1955	-	115	-	-	-	4	-	1	-	120

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
-	Automobile accident												
-	Burns - not from electric source												
-	Defect or failure of equipment or machines												
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
1	Falling - (Other than in water)		1								1		25.0
1	Handling materials		1								1		25.0
-	Infection from minor wounds												
2	Involving use of tools - no defects		2								2		50.0
-	Miscellaneous												
-	Striking against or struck by objects												
4	TOTAL	-	4	-	-	-	-	-	-	-	4		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1953	-	1	-	-	-	-	-	-	-	1
1954	-	1	-	-	-	-	-	-	-	1
1955	-	4	-	-	-	-	-	-	-	4

* - Other utilities as herein used consist of: Bridge, Canal, Ferry, Pipeline and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1953 and 1954

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1955 WITH 1954	YEAR			COMPARISON OF 1955 WITH 1954	YEAR			COMPARISON OF 1955 WITH 1954
	1953	1954	1955		1953	1954	1955		1953	1954	1955	
Steam Railroad	1859	1409	1591	+12.92%	152	96	117	+21.87%	1939	1420	1555	+9.51%
Street Railway	3066	2790	2279	-18.32%	30	27	24	-11.11%	3693	3163	2656	-16.03%
Motor Transportation	1766	1944	1810	- 6.89%	37	30	41	+36.67%	2424	2563	2661	+3.82%
Electric	365	363	388	+6.89%	36	32	28	-12.50%	348	348	372	+6.89%
Gas	66	78	80	+2.56%	8	3	3	-	64	82	82	-
Water	24	34	34	-	-	1	-	-100.00%	24	33	34	+3.03%
Telephone & Telegraph	99	96	118	+22.92%	4	2	-	-100.00%	96	97	120	+23.71%
Other Utilities	1	1	4	+300.00%	-	-	-	-	1	1	4	+300.00%
TOTAL	7210*	6685*	6290*	- 5.91%	267	191	213	+11.52%	8533*	7672*	7466*	- 2.68%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2176	20.69
Protected by trainmen	1630	15.50
Total Protected	3806	36.19
Unprotected (see note)	6712	63.81
TOTAL CROSSINGS	10,518	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	317	8.33
Watchmen	200	5.25
Flashing light signals	1519*	39.91
Other visual signals	38**	1.00
Bells	102	2.68
Trainmen	1630	42.33
TOTAL	3806	100.00

* - Additional protection by short-arm gates at 224 crossings.
**- Includes 17 crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	191	60		2	1		192	62	254	57.99
Protected by gates	11	4		2		1	11	7	18	4.11
Protection by watchmen	12	10					12	10	22	5.02
Protected by bells	4	1					4	1	5	1.14
Protected by visual signals	82	20		4	1	1	83	25	108	24.66
Protected by trainmen	22	9					22	9	31	7.08
Total Accidents at Protected Crossings	131	44		6	1	2	132	52	184	42.01
Total Accidents--Non Casualty	322				2		324			73.97
Total Accidents--Casualty		104		8		2		114		26.03
TOTAL ACCIDENTS	426		8		4				438	
Per Cent of Total Accidents	97.26		1.83		0.91					100.00

NC - Non Casualty; C - Casualty
* See "Note" Page 16 under Table A

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	19	63		2			19	65	84	53.85
Protected by gates		5		2		1		8	8	5.13
Protected by watchmen	6	14					6	14	20	12.82
Protected by bells		2						2	2	1.28
Protected by visual signals	7	19	1	3		1	8	23	31	19.87
Protected by trainmen	2	9					2	9	11	7.05
TOTAL	34	112	1	7		2	35	121	156	100.00
Killed and Injured at protected crossings	15	49	1	5		2	16	56	72	46.15
Per Cent of Total Killed & Injured	88.89		8.33		2.78					100.00

K - Killed; I - Injured
* See "Note" Page 16 under Table A

1953, 1954 and 1955

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Decrease	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR: Increase
*PROTECTED	1953	2179	17	26.1	
	1954	2178	13	23.5	
	1955	2176	14		7.7
**UNPROTECTED	1953	8450	31		82.4
	1954	8379	18	42.0	
	1955	8342	21		16.7

			INJURED		
*PROTECTED	1953	2179	52	11.9	
	1954	2178	33	36.6	
	1955	2176	47		42.4
**UNPROTECTED	1953	8450	99	15.4	
	1954	8379	92	7.1	
	1955	8342	74	19.6	

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED
1953, 1954 and 1955

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1953	151	- 6.2%	14	+ 7.7%	45	+ 2.3%
		1954	126	-16.6%	12	-14.3%	28	- 37.7%
		1955	134	+ 6.3%	11	- 8.5%	47	+ 67.9%
	UNPROTECTED**	1953	97	-30.2%	2	- 60.0%	28	- 22.2%
		1954	109	+12.4%	3	+50.0%	36	+28.6%
		1955	102	- 6.4%	8	+166.7%	26	- 27.8%
RURAL	PROTECTED	1953	68	+21.4%	4	- 60.0%	14	- 22.2%
		1954	57	-16.2%	4	-	12	- 14.3%
		1955	50	-12.3%	5	+25.0%	9	- 25.0%
	UNPROTECTED**	1953	146	+13.2%	28	+133.3%	64	- 17.9%
		1954	114	-21.9%	12	-57.1%	49	- 23.4%
		1955	152	+33.3%	11	- 8.5%	39	- 20.4%

* - Cities or boroughs with population over 2,500.
** - See "Note" Page 16 under Table A.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1953, 1954 and 1955

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FOR PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1953	233	4.5	
	1954	217	6.9	
	1955	236		8.7
		PERSONS KILLED		
	1953	36		24.1
	1954	27	25.0	
	1955	19	29.6	
		PERSONS INJURED		
	1953	71	31.7	
	1954	63	11.3	
	1955	63	-	
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1953	229	5.0	
	1954	189	17.5	
	1955	202		6.9
		PERSONS KILLED		
	1953	12		9.1
	1954	4	66.7	
	1955	16		300.0
		PERSONS INJURED		
	1953	80		11.1
	1954	62	22.5	
	1955	58	6.4	

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	13	2.97		3
1 to 1:59 a.m.	18	4.11	1	6
2 to 2:59 a.m.	17	3.88		7
3 to 3:59 a.m.	10	2.28		2
4 to 4:59 a.m.	9	2.05		2
5 to 5:59 a.m.	11	2.51	1	2
6 to 6:59 a.m.	19	4.34		4
7 to 7:59 a.m.	19	4.34		6
8 to 8:59 a.m.	15	3.42	1	6
9 to 9:59 a.m.	26	5.94	2	2
10 to 10.59 a.m.	23	5.25	3	11
11 to 11:59 a.m.	14	3.20		4
Noon to 12:59 p.m.	13	2.97		4
1 to 1:59 p.m.	16	3.65	6	4
2 to 2:59 p.m.	23	5.25	3	4
3 to 3:59 p.m.	19	4.34	1	6
4 to 4:59 p.m.	24	5.48	3	3
5 to 5:59 p.m.	24	5.48		4
6 to 6:59 p.m.	26	5.94	4	4
7 to 7:59 p.m.	12	2.74	1	3
8 to 8:59 p.m.	15	3.42	1	8
9 to 9:59 p.m.	19	4.34	4	5
10 to 10:59 p.m.	24	5.48	3	6
11 to 11:59 p.m.	28	6.39	1	15
Not Reported	1	.23		
TOTAL	438	100.00	35	121

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	33	7.53	2	17
Monday	68	15.53	7	17
Tuesday	66	15.07	10	19
Wednesday	48	10.96	1	12
Thursday	82	18.72	8	21
Friday	71	16.21		14
Saturday	70	15.98	7	21
TOTAL	438	100.00	35	121

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	64	14.61	6	18
February	40	9.13	1	13
March	47	10.73	3	11
April	28	6.39	4	10
May	30	6.85		11
June	29	6.62	1	8
July	20	4.57		6
August	21	4.80	3	1
September	28	6.39	4	7
October	42	9.59	7	12
November	41	9.36		14
December	48	10.96	6	10
TOTAL	438	100.00	35	121

GRADE CROSSING ACCIDENTS OCCURRED
1953, 1954 and 1955

CHARACTER OF TRACK	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1953	416	47	139
	1954	377	31	120
	1955	394	33	117
Public Siding	1953	34	-	12
	1954	26	-	5
	1955	29	-	4
Private Siding	1953	12	1	-
	1954	3	-	-
	1955	15	2	-
Private Grade Crossing (Private Road)	1953	51	8	13
	1954	52	5	15
	1955	58	5	9

ACCIDENTS INVOLVING CONTACT WITH TRAINS
1953, 1954 and 1955

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1953	117	44	135
	1954	87	21	119
	1955	104	34	112
Pedestrians	1953	7	4	3
	1954	11	9	2
	1955	8	1	7
Streetcars Autobuses Taxicabs	1953	3	-	12
	1954	2	-	3
	1955	-	-	-
Bicycles Motorcycles Wagons	1953	1	-	1
	1954	2	1	1
	1955	2	-	2

TABLE M - ACCIDENTS INVOLVING VEHICLES AT
UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS
RESULTING IN NO CASUALTIES
1953, 1954 and 1955

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1953	166	19.4	
	1954	163	1.8	
	1955	192		17.8
Protected	1953	168		7.0
	1954	141	16.1	
	1955	132	6.4	

* - See "Note" Page 16.

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	1	2	0.30
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	1	0.15
Auto driven through lowered gates and struck by engine or train	-	1	2	0.30
Auto stalled on crossing and struck by engine or train	-	2	4	0.60
Auto struck by engine or train - gates not lowered	-	2	5	0.75
Auto struck by engine or train - gates out of order	-	-	2	0.30
Auto driven into side of moving train - gates out of order	-	-	-	
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	20	63	238	35.79
Auto driven into side of engine or train moving over crossing	13	37	106	15.94
Auto driven into side of engine or train standing on crossing	-	2	11	1.66
Auto stalled on crossing and struck by engine or train	1	4	56	8.42
Total Accidents Involving Contact between Train and Auto	34	112	427	64.21
Auto colliding with crossing gates - No contact with train	-	2	202	30.38
Auto colliding with flashing light signal installations-No contact with trains	-	1	36	5.41
Total Accidents Involving Automobiles at Grade Crossings	34	115	665	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	27	21	9	17	10.96
Passenger train - reverse movement					
Freight train - normal movement	246	83	25	94	75.11
Freight train - reverse movement	4	1		1	1.14
Freight train - car ahead of engine					
Switching movement - engine normal ahead of draft	9				2.05
Switching movement - engine reverse ahead of draft	1	1		1	0.46
Switching movement - engine pushing cars	10				2.28
Light engine - normal movement	22	6	1	6	6.39
Light engine - reverse movement	1				0.23
Motor track cars	3	1		1	0.92
Cars not attached	1	1		1	0.46
TOTAL	324	114	35	121	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1953, 1954 and 1955

TYPE OF PRO-TECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	365	1953	272*	0.745	1	4
	333	1954	267*	0.802	-	4
	317	1955	221*	0.697	-	8
Watch-man	243	1953	27	0.111	5	10
	205	1954	19	0.093	2	-
	200	1955	26	0.130	6	15
Bells	108	1953	2	0.018	-	-
	99	1954	6	0.061	-	-
	102	1955	5	0.049	-	2
Visual Signals	1463	1953	174*	0.118	10	32
	1541	1954	152*	0.099	4	30
	1557	1955	138*	0.089	7	20
Train-men	1579	1953	35	0.022	1	7
	1594	1954	31	0.019	2	7
	1630	1955	31	0.019	2	9

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAINS AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to pre-vent accident	1953	5	-	1
	1954	6	-	3
	1955	5	-	2
Gates out of order	1953	1	-	-
	1954	-	-	-
	1955	2	-	-
Persons passing under or around lowered gates	1953	2	-	2
	1954	1	1	-
	1955	2	-	2
Automobile driven through lowered gates striking or being struck by train	1953	6	1	2
	1954	3	-	1
	1955	5	-	2
Unassigned	1953	4	-	1
	1954	11	-	-
	1955	4	-	2

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1953, 1954 and 1955

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1953	253	2.7	
	1954	245	3.2	
	1955	202	17.5	
Flashing light signals struck and damaged	1953	35	5.4	
	1954	50		42.9
	1955	36	28.0	

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1946-1955

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1946	27	2	10
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8
1951	27	4	4
1952	20	-	8
1953	13	1	5
1954	10	-	2
1955	8	-	2

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	211	82	30	87	66.89
Cloudy	90	30	4	32	27.40
Fog	14	1		2	3.42
Rain	7	1	1		1.83
Snow	2				0.46
TOTAL	324	114	35	121	100.00

TABLE U

SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	10	2		2	2.74
1 - 5	122	17	5	21	31.74
6 - 10	61	18	1	17	18.04
11 - 20	56	26	5	33	18.72
21 - 30	41	31	16	31	16.44
31 - 40	15	9	5	6	5.48
41 - 50	13	6	1	8	4.34
51 - 60	5	3	1	2	1.82
61 - 70					
Over 70		2	1	1	0.45
Not Reported	1				0.23
TOTAL	324	114	35	121	100.00

TABLE V

ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED

(Vehicles only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	221	80	30	85	70.00
Wet	48	15	3	16	14.65
Muddy		1		1	0.23
Snowy	27	4		5	7.21
Icy	16	3		4	4.42
Not Reported	12	3	1	3	3.49
TOTAL	324	106	34	114	100.00

TABLE W

AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	49	5	19	11.40
21 - 30	74	6	28	17.21
31 - 40	59	10	18	13.72
41 - 50	36	4	14	8.37
51 - 60	25	4	9	5.81
Over 60	20	2	7	4.65
Not Reported	167	3	19	38.84
TOTAL	430	34	114	100.00

TABLE X

SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	385	30	101	89.54
Female	32	2	5	7.44
Not Reported	13	2	8	3.02
TOTAL	430	34	114	100.00

TABLE Y

FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENT
Familiar	321	17	79	74.65
Not Familiar	14	3	4	3.26
Not Reported	95	14	31	22.09
TOTAL	430	34	114	100.00

TABLE 2

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	6		1	1.37
Allegheny	41	1	10	9.36
Armstrong	5		1	1.14
Beaver	5	2	1	1.14
Bedford	1			0.23
Berks	6		4	1.37
Blair	11	1	3	2.51
Bradford	2	1		0.46
Bucks	5	1	2	1.14
Butler	9		2	2.06
Cambria	16			3.65
Cameron	1		2	0.23
Carbon	2	2	1	0.46
Centre	2		1	0.46
Chester	13		3	2.97
Clarion	1			0.23
Clearfield	10		5	2.28
Clinton	4	1	2	0.91
Columbia	4		2	0.91
Crawford	6		1	1.37
Cumberland	6		2	1.37
Dauphin	3			0.68
Delaware	5		2	1.14
Elk	2		2	0.46
Erie	18	1	1	4.11
Fayette	15		1	3.42
Forest	3	1		0.68
Franklin	3	2		0.68
Fulton				
Greene				
Huntingdon				
Indiana	6	1	1	1.37
Jefferson	7	1	2	1.60
Juniata				

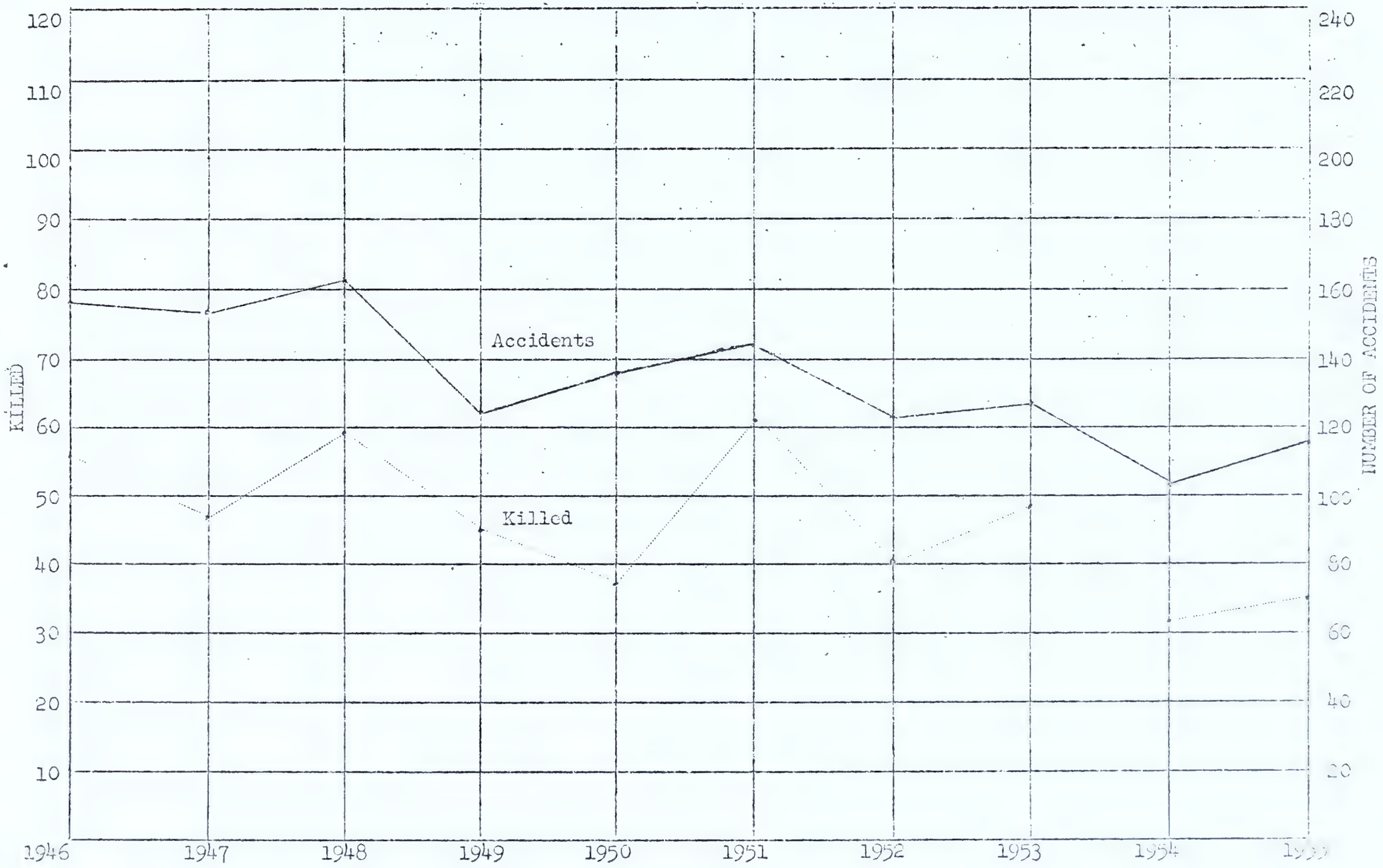
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	14	1	8	3.20
Lancaster	4	1	3	0.91
Lawrence	2			0.46
Lebanon	6	2	2	1.37
Lehigh	10		5	2.28
Luzerne	18		6	4.11
Lycoming	11		2	2.51
McKean	3			0.68
Mercer	27	3	5	6.16
Mifflin	2			0.46
Monroe				
Montgomery	11		2	2.51
Montour	2			0.46
Northampton	9		2	2.06
Northumberland	13	1	4	2.97
Perry				
Philadelphia	14		7	3.20
Pike				
Potter				
Schuylkill	9		6	2.06
Snyder				
Somerset	8		2	1.83
Sullivan				
Susquehanna	3	1		0.68
Tioga	2			0.46
Union	5	3	3	1.14
Venango	2		2	0.46
Warren	5	1	1	1.14
Washington	14		2	3.20
Wayne				
Westmoreland	15	5	5	3.42
Wyoming				
York	11	2	2	2.51
TOTAL	438	35	121	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1946 - 1955

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
1946	10,988	592	54	204	2,305,507	2.57
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	155	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73
1951	10,812	570	61	149	3,338,059	1.71
1952	10,773	485	40	176	3,409,844	1.42
1953	10,629	462	48	151	3,455,695	1.34
1954	10,557	406	31	125	3,564,318	1.14
1955	10,518	438	35	121	3,778,734	1.16

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSINGS OVER STEAM RAILROADS IN PENNSYLVANIA 1946 - 1955



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. 1 - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
745	Collision with other vehicle		97	1	770				4		379			1	1250	16.67	88.28
4	Collision with fixed object	1		1	5									2	5	33.33	.35
64	Struck by taxicab				3			2	55				8	2	66	33.33	4.66
73	Running or walking into side of taxicab				7			1	73					1	80	16.67	5.65
1	Boarding or alighting (Standing vehicle)				1										1		0.07
-	Falling within vehicle																
2	Caught by vehicle doors				2										2		0.14
2	Jumping on or off vehicle in motion				2										2		0.14
4	Sudden stop of vehicle				6										6		0.43
1	Defect or failure of equipment				1										1		0.07
1	Vehicle skidded				1										1		0.07
-	Highway defect																
-	Apparent reckless operating of vehicle																
2	Miscellaneous		1		1										2		0.14
899	TOTAL	1	98	2	799	-	-	3	132	-	379	-	8	6	1416		
	Per Cent Killed	16.67		33.33				50.00								100.00	
	Per Cent Injured		6.92		56.43				9.32		26.77		0.56				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
257	Collision with other vehicle		28		285				2	5	225		1	5	541	50.00	49.41
7	Collision with fixed object		1		28										29		2.65
49	Struck by autobus							3	38			2	7	5	45	50.00	4.11
24	Running or walking into side of autobus								25						25		2.28
171	Boarding or alighting (Standing vehicle)				172										172		15.71
80	Falling within vehicle				80										80		7.31
48	Caught by vehicle doors				48										48		4.38
1	Jumping on or off vehicle in motion						1								1		0.09
111	Sudden stop of vehicle				115										115		10.50
2	Defect or failure of equipment				2										2		0.18
6	Vehicle skidded				6										6		0.55
4	Highway defect				4										4		0.36
-	Apparent reckless operation of vehicle																
27	Miscellaneous		8		19										27		2.47
787	TOTAL	-	37	-	759	-	1	3	65	5	225	2	8	10	1095		
	Per Cent Killed							30.00		50.00		20.00				100.00	
	Per Cent Injured		3.38		69.31		0.09		5.94		20.55		0.73				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1	Collision with other vehicle		1								2				3		60.0
-	Collision with fixed object																
1	Struck by autobus								1						1		20.0
-	Running or walking into side of autobus																
1	Boarding or alighting (Standing vehicle)				1										1		20.0
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operation of vehicle																
-	Miscellaneous																
3	TOTAL	-	1	-	1	-	-	-	1	-	2	-	-	-	5		
	Per Cent Killed																
	Per Cent Injured		20.0		20.0				20.0		40.0						100.0

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
87	Collision with other vehicles	3	6		2					19	96			22	104	100.00	86.67
1	Collision with fixed object												1		1		0.83
6	Struck by truck								6				1		7		5.84
1	Running or walking into side of truck								1						1		0.83
-	Boarding or alighting (Standing vehicle)																
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
3	Vehicle skidded		3												3		2.50
-	Highway defect																
-	Apparent reckless operation of vehicle																
4	Miscellaneous		3										1		4		3.33
102	TOTAL	3	12	-	2	-	-	-	7	19	96	-	3	22	120		
	Per Cent Killed	13.64								86.36						100.00	
	Per Cent Injured		10.00		1.66				5.84		80.00		2.50				100.00

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
16	Collision with other vehicle		2		2					1	20			1	24	33.3	96.0
-	Collision with fixed object																
2	Struck by taxicab, autobus or truck							1				1		2		66.7	
1	Running or walking into side of taxicab, autobus or truck								1						1		4.0
-	Boarding or alighting (Standing vehicle)																
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operation of vehicle																
-	Miscellaneous																
19	TOTAL	-	2	-	2	-	-	1	1	1	20	1	-	3	25		
	Per Cent Killed							33.3		33.3		33.4				100.0	
	Per Cent Injured		8.0		8.0				4.0		80.0						100.0

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1953	2	101	-	570	-	-	1	124	-	143	-	4	3	942
1954	-	166	2	722	-	-	2	133	-	218	-	15	4	1254
1955	1	98	2	799	-	-	3	132	-	379	-	8	6	1416

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1953	-	62	5	912	-	2	6	92	3	238	-	7	14	1313
1954	1	51	1	788	-	2	8	80	1	215	1	8	12	1144
1955	-	37	-	759	-	1	3	65	5	225	2	8	10	1095

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1953	-	-	-	9	-	-	-	-	-	-	-	-	-	9
1954	-	-	-	4	-	-	1	1	-	3	-	-	1	8
1955	-	1	-	1	-	-	-	1	-	2	-	-	-	5

K - Killed; I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1953	-	24	1	2	-	-	3	8	14	83	-	1	18	118
1954	3	19	-	2	-	-	-	13	10	86	-	3	13	123
1955	3	12	-	2	-	-	-	7	19	96	-	3	22	120

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1953	-	12	-	2	-	-	1	-	1	28	-	-	2	42
1954	-	6	-	1	-	-	-	2	-	24	-	1	-	34
1955	-	2	-	2	-	-	1	1	1	20	1	-	3	25

K - Killed; I - Injured

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PENNSYLVANIA PUBLIC UTILITY COMMISSION

1956

Record of Accidents Involving the Facilities or Operations of Transportation and Service Utilities and Contract Carriers

Harrisburg, Pennsylvania
August 5, 1957

PENNSYLVANIA PUBLIC UTILITY COMMISSION

Harrisburg, Pennsylvania
August 5, 1957

SUBJECT: Annual Accident Report

TO: The Commission

FROM: Directors Isenberg and Johnson

We have prepared and submit herewith a report of accidents involving the facilities or operations of public utilities in Pennsylvania in 1956.

Under the provisions of Section 416 of the Pennsylvania Public Utility Law, every public utility is required to file reports of accidents with the Commission. In 1956 the following number of utilities, providing the services indicated, were under the jurisdiction of this Commission and subject to the above requirements:

Steam Railroads	58	Canal	1
Street Railways	5	Electric	26
Ferries	12	Gas (Artificial)	19
Motorboats	14	Gas (Natural)	74
Express	1	Pipe Lines	8
Bus - Scheduled Service	399	Sewerage	19
Bus - Group and Party	310	Steam Heat	19
Taxi - Call and Demand	705	Telegraph	2
Truck - Common Carrier	5355	Telephone	113
Airways	38	Water	484
Incline Plane	3	Wharfage	1
Stock Yards	2		

Total Transportation Utilities	6,902
Total Service Utilities	766
Total	7,668

In addition to the foregoing utilities, the Public Utility Law provides that the Commission shall assume jurisdiction over contract carriage by motor vehicles and the 528 contract carriers who have received permits from the Commission are likewise required to file reports of accidents.

In order to facilitate the reporting of accidents, the Commission's regulations have so far as is practicable been made to conform to the rules of other agencies to which the various utilities are required to file accident reports. Accordingly, service utilities and steam railroads are required to report only personal injury accidents resulting in the disability of employees for more than three days; injuries to other than an employee on duty, if the injury is sufficient to incapacitate the injured person from following his customary vocation, or mode of living for a period of more than one day. Steam railroads are further required to report property damage accidents to an extent of $350 or more, including the expense of clearing the wreck, and all accidents at grade crossings, whether or not injuries occur. Street railway companies are required to report accidents resulting in personal injury, requiring medical attention, which incapacitates the injured person from following his customary vocation, or mode of living for a period of more than one day. Common carriers and contract carriers by motor vehicle are to report to the Commission, only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more.

Reference to the following pages, summarized on page 15, will show that in 1956 there was a decrease in casualty accidents involving all transportation utilities and also in accidents involving service utilities. The summary which includes all utilities indicates that the total number of accidents decreased 6.95% during the year and that the number of fatalities was increased 2.82% during the same period.

The attached report is submitted for the consideration of the Commission.

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TABLE NO. 1 - SUMMARY OF UTILITY ACCIDENTS INVOLVING PERSONAL INJURIES

CLASS OF UTILITY	NUMBER OF ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL		
				ACCIDENTS	KILLED	INJURED
Steam Railroad	1976	120	1958	33.68	54.79	28.15
Street Railway	1455	18	1765	24.80	8.22	25.37
Motor Transportation	1835	42	2645	31.28	19.18	38.02
Electric	402	34	388	6.85	15.52	5.58
Gas	67	4	69	1.14	1.83	0.99
Water	24	-	24	0.41	-	0.35
Telephone & Telegraph	105	1	104	1.79	.46	1.50
Other Utilities	3	-	3	0.05	-	0.04
TOTAL	5853*	219	6922*	100.00	100.00	100.00

TABLE NO. 2 - CLASSIFICATION OF PERSONS KILLED AND INJURED IN UTILITY ACCIDENTS

CLASS OF PERSON	STEAM RAILROAD		STREET-RAILWAY		MOTOR TRANSPORTATION		ELECTRIC		GAS		WATER		TELEPHONE AND TELEGRAPH		OTHER UTILITIES		TOTAL		PER CENT	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
Employee	16	1570	1	120	8	92	6	363	2	57		22		99		3	33	2326	15.07	33.44
Trespasser	51	42	1	6		2	3	3									55	53	25.12	0.76
Other	52	212		5	1	12	24	22	2	8		1	1	4			80	264	36.53	3.79
Passenger, Patron or Consumer	1	134	2	1108	1	1571	1			4		1		1			5	2819	2.28	40.53
Pedestrian			8	124	6	227											14	351	6.39	5.05
Occupant Other Vehicle			6	402	26	741											32	1143	14.61	16.43
TOTAL	120	1958	18	1765	42	2645	34	388	4	69	-	24	1	104	-	3	219	6922*		
Per Cent Killed	54.79		8.22		19.18		15.52		1.83				0.46						100.00	
Per Cent Injured		28.15		25.37		38.02		5.58		0.99		0.35		1.50		0.04				100.00

K - Killed; I - Injured

* - Totals adjusted in Tables 1 and 2 to eliminate duplications resulting from accidents involving two utilities.

TABLE NO. 3 - CASUALTY ACCIDENTS ON STEAM RAILROADS

No. Of Accs.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OTHERS*		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
152	Grade Crossings (for details-see appendix)							50	168	50	168	41.67	8.58
12	Collisions	1	18		2		1		1	1	22	0.83	1.12
10	Derailments	1	10		3					1	13	0.83	0.66
81	At station or loading platform		28		32		2		19		81		4.14
19	Defect or failure of roadway or equipment	2	18		1					2	19	1.67	0.97
76	Operating switches		76								76		3.88
53	Struck overhead or side obstruction		52		1						53		2.71
29	Repairing track or roadbed		29								29		1.48
31	Struck by flying missile, glass, etc.		30		1						31		1.59
112	Coupling or uncoupling	1	111						1	1	112	0.83	5.72
75	Falling on locomotive or car		60		13				3		76		3.88
74	Falling from locomotive or car	1	66	1	4		2			2	72	1.67	3.68
375	Getting on or off locomotive or car		317		50		7		1		375		19.15
106	Struck by locomotive or car	10	27		2	46	19	2	2	58	50	48.33	2.55
114	Operating hand brakes		114								114		5.82
232	Sudden starting or stopping of trains		229		6		3		3		241		12.31
5	Coming in contact with catenary wire		2			2	4			2	6	1.67	0.31
28	On or about locomotive		28								28		1.43
392	Miscellaneous		355		19	3	4		14	3	392	2.50	20.02
1976	TOTAL	16	1570	1	134	51	42	52	212	120	1958		
	Per Cent Killed	13.33		0.83		42.50		43.34				100.00	
	Per Cent Injured		80.18		6.84		2.15		10.83				100.00

* - "Others" consist chiefly of travelers on streets and highways, or persons lawfully on company premises.

K - Killed; I - Injured

TABLE NO. 4
STEAM RAILROAD NON-CASUALTY ACCIDENTS
INVOLVING PROPERTY DAMAGE OF $350 OR MORE

TYPE OF ACCIDENT		NUMBER OF ACCIDENTS	PER CENT OF TOTAL	PER CENT INCREASE OR DECREASE*
COLLISIONS:				
MAIN TRACK	24			+26.32
YARD TRACK	167	191	18.62	- 8.74
DERAILMENTS:				
MAIN TRACK	290			-30.04
YARD TRACK	336	626	61.01	-17.24
DEFECT OR FAILURE OF ROADWAY OR EQUIPMENT		187	18.23	-21.09
MISCELLANEOUS		22	2.14	-35.29
TOTAL		1026	100.00	- 6.90

Note: 350 of the 626 Derailments (55.91%) were caused by defects or failure of roadway or equipment.

TABLE NO. 5
THREE-YEAR COMPARISON OF
NON-CASUALTY ACCIDENTS ON STEAM RAILROADS
(PROPERTY DAMAGE $350 OR MORE)

YEAR	NUMBER OF ACCIDENTS	PER CENT INCREASE OR DECREASE	PROPERTY DAMAGE	PER CENT INCREASE OR DECREASE
1954	818	-28.37	$3,652,410	-14.60
1955	1102	+34.72	3,697,809	+ 1.24
1956	1026	- 6.90	4,782,775	+ 29.34

TABLE NO. 6
THREE-YEAR COMPARISON OF PERSONS KILLED AND INJURED ON STEAM RAILROADS

CLASS OF PERSON	KILLED			% INCREASE OR DECREASE*	INJURED			% INCREASE OR DECREASE*
	1954	1955	1956		1954	1955	1956	
EMPLOYEES	15	23	16	-30.43	1029	1236	1570	+ 27.02
PASSENGERS	2	2	1	-50.00	136	143	134	- 6.29
TRESPASSERS	38	50	51	+ 2.00	34	18	42	+122.22
OTHERS **	41	42	52	+23.81	221	158	212	+ 34.18
TOTALS	96	117	120	+ 2.56	1420	1555	1958	+ 25.91

* Comparison of 1956 with 1955
** Others consist chiefly of travelers on streets and highways.

TABLE NO. 7
ACCIDENTS TO EMPLOYEES
OF
STEAM RAILROADS IN PENNSYLVANIA

OCCUPATION	KILLED	INJURED	PER CENT	
			KILLED	INJURED
Road Enginemen		27		1.72
Road Firemen		28		1.78
Road Conductors	2	114	12.50	7.26
Road Brakemen	2	211	12.50	13.44
Road Flagmen		29		1.85
Road Baggagemen		9		0.57
Yard Enginemen and Firemen	1	50	6.25	3.19
Yard Brakemen and Conductors	6	887	37.50	56.50
Yard Switch Tenders		4		0.25
Crossing Watchmen		1		0.06
Track Walkers		3		0.19
Section Foremen and Work Train Laborers	2	54	12.50	3.44
Signalmen and Signal Maintainers		8		0.51
Station Baggagemen		11		0.70
Car Cleaners		6		0.38
Car Inspectors	2	12	12.50	0.76
Car Repairmen		21		1.34
Clerks		2		0.13
Dining Car Employees		45		2.87
Miscellaneous	1	45	6.25	2.87
Employees Not on Duty		3		0.19
TOTAL	16	1570	100.00	100.00

TABLE NO. 8

AGES OF ENGINEMEN, FIREMEN, CONDUCTORS, BRAKEMEN AND FLAGMEN KILLED AND INJURED IN TRAIN AND TRAIN SERVICE ACCIDENTS

AGE	Road Enginemen			Road Firemen			Road Conductors			Road Brakemen		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21											1	0.47
21 - 30					2	7.14				1	12	6.10
31 - 40		4	14.82		5	17.86	1	15	13.91	1	59	28.17
41 - 50		2	7.41		13	46.43		14	12.17		48	22.53
51 - 60		9	33.33		4	14.29		40	34.78		45	21.12
61		1	3.70					2	1.74		3	1.41
62		2	7.41		1	3.57		4	3.48		2	0.94
63		1	3.70					4	3.48		4	1.88
64		3	11.11					9	7.83		4	1.88
65								3	2.61		2	0.94
Over 65		4	14.82				1	11	10.43		5	2.35
Not Reported		1	3.70		3	10.71		11	9.57		26	12.21
TOTAL	-	27	100.00	-	28	100.00	2	113	100.00	2	211	100.00

AGE	Road Flagmen			Yard Enginemen & Firemen			Yard Brakemen & Conductors			Total		
	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total	Killed	Injured	Per Cent of Total
Under 21								4	0.45		5	0.37
21 - 30		1	3.45		4	7.85	1	212	23.85	2	231	17.18
31 - 40		8	27.59		15	29.41	4	281	31.92	6	387	28.98
41 - 50		6	20.69		10	19.61		128	14.33		221	16.30
51 - 60		4	13.79	1	11	23.53		114	12.77	1	227	16.82
61		1	3.45		1	1.96		12	1.34		20	1.48
62					3	5.88		7	0.78		19	1.40
63		1	3.45		1	1.96		11	1.23		22	1.62
64		1	3.45					5	0.56		22	1.62
65								4	0.45		9	0.66
Over 65		3	10.34		2	3.92	1	21	2.46	2	46	3.54
Not Reported		4	13.79		3	5.88		88	9.86		136	10.03
TOTAL	-	29	100.00	1	50	100.00	6	887	100.00	11	1345	100.00

TABLE NO. 9 - ACCIDENTS ON STREET RAILWAYS

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSENGERS		TRESPASSERS		OCCUPANTS OF OTHER VEHICLES		PEDESTRIANS		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
11	Collision of cars		3		42				1						46		2.61
367	Collision of car and vehicle		21		163			6	399		2		3	6	588	33.33	33.31
121	Struck by car	1	1	2	9	1	1		1	8	101		1	12	114	66.67	6.46
5	Derailment of car				30								1		31		1.76
9	Contact with overhead or side obst.		5		3		1								9		0.51
2	Contact with trolley or feed wire or third rail								1		1				2		0.11
23	Sudden stop		3		21										24		1.36
4	Defect or failure of roadway or eqp.		2		3										5		0.28
85	Caught by doors		10		75										85		4.81
69	Boarding standing car		5		64										69		3.91
169	Alighting from car		7		163						1				171		9.69
173	Falling within car		1		179										180		10.20
1	Jumping on or off car while in motion						1								1		0.06
286	At elevated or subway platforms				278		2				10				290		16.43
9	Repair work on right of way		9												9		0.51
33	Struck by flying missile, glass, etc.		7		26						1				34		1.93
88	Miscellaneous		46		52		1				8				107		6.06
1455	TOTAL	1	120	2	1108	1	6	6	402	8	124	-	5	18	1765		
	Per Cent Killed	5.56		11.11		5.56		33.33		44.44						100.00	
	Per Cent Injured		6.80		62.78		0.34		22.78		7.02		0.28				100.00

K - Killed; I - Injured

TABLE NO. 10 - COMPARISON OF PERSONS KILLED AND INJURED ON STREET RAILWAYS

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1956 WITH 1955	YEAR			COMPARISON OF 1956 WITH 1955
	1954	1955	1956		1954	1955	1956	
Employees	2	-	1	-	109	113	120	+ 6.19%
Passengers	4	7	2	- 71.43%	2047	1631	1108	- 32.07%
Trespassers	4	2	1	- 50.00%	6	4	6	+ 50.00%
Occupants of other vehicles	4	5	6	+ 20.00%	761	741	402	- 45.75%
Pedestrians	13	10	8	- 20.00%	209	159	124	- 22.01%
Others	-	-	-	-	31	8	5	- 37.50%
TOTAL	27	24	18	- 25.00%	3163	2656	1765	- 33.55%

TABLE NO. 11 - SUMMARY OF ACCIDENTS INVOLVING REGULATED TRANSPORTATION BY MOTOR VEHICLE
(See Appendix - Tables 1 - X for details of casualty accidents)

NO. OF ACCS.	CAUSE OR NATURE OF ACCIDENTS	EM-PLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CEN	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1011	Collision with other vehicle	2	53	1	983				11	26	741			29	1788	69.05	67.60
17	Collision with fixed object	1	6		23				1					1	30	2.38	1.1
210	Struck by auto-bus, taxicab or truck	2			12			6	187			1	11	9	210	21.43	7.9
27	Running or walking into side of auto-bus, taxicab or truck								27						27		1.02
215	Boarding or alighting (standing vehicle)		4		214										218		8.25
92	Falling within vehicle				93										93		3.52
64	Caught by vehicle doors				64										64		2.42
4	Jumping on or off vehicle in motion				2		2								4		0.15
140	Sudden stop of vehicle		1		145				1						147		5.56
4	Defect or failure of equipment	1			3									1	3	2.38	0.11
8	Vehicle skidded		4		15										19		0.72
2	Highway defect		1		1										2		0.07
-	Apparent reckless operation of vehicle																
41	Miscellaneous	2	23		16								1	2	40	4.76	1.51
1835	TOTAL	8	92	1	1571	-	2	6	227	26	741	1	12	42	2645		
	Per Cent Killed	19.05		2.38				14.29		61.90		2.38				100.00	
	Per Cent Injured		3.48		59.40		0.07		8.58		28.02		0.45				100.00

K - Killed; I - Injured

TABLE NO. 12 - SUMMARY OF ALL CLASSES OF ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TYPE OF SERVICE	NUMBER OF REGULATED OPERATORS	NUMBER OF ACCIDENTS (CASUALTY)	KILLED	INJURED	(NON-CASUALTY)	TOTAL PROPERTY DAMAGE
Call and Demand (Taxi Service)	705	714	5	1127	224	$142,165.95
Schedule Route (Bus Service)	399	991	14	1340	373	241,885.83
Group and Party (Bus Service)	310	5	4	27	3	15,180.00
Freight and Merchandise (Truck)	5355	106	17	129	127	222,176.47
Contract Carrier (Persons and Property)	528	19	2	22	27	43,670.00
TOTAL	7297	1835	42	2645	754	$665,078.25

Note: See Appendix - Tables I-X - for details of casualty accidents

TABLE NO. 13 - THREE-YEAR COMPARISON OF CASUALTY AND PROPERTY DAMAGE ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

YEAR	NUMBER OF REGULATED OPERATORS	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED		PROPERTY DAMAGE	
		NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	AMOUNT	COMPARISON WITH PREVIOUS YEAR
1954	8243	2723	+ 10.60%	30	- 18.92%	2563	- 5.73%	$578,152.35	- 12.91%
1955	7455	2608	- 4.22%	41	+ 36.67%	2661	+ 3.82%	609,866.34	5.49%
1956	7297	2589	- 0.73%	42	+ 2.43%	2645	- 0.60%	665,078.25	+ 9.05%

Note: Only accidents resulting in personal injury requiring medical attention, or property damage in the amount of $100 or more, are to be reported to the Commission.

TABLE NO. 14 - SUMMARY OF ACCIDENTS INVOLVING SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation								2		2		0.3
37	Automobile accident	1	37			1	5			2	42	5.1	7.1
8	Burns - not from electric source		6				2				8		1.4
5	Defect or failure of equipment or machines		5								5		0.8
-	Drowning												
54	Electric - Contact with charged wires or equipment	5	12	3	3	23	20	1		32	35	82.1	6.0
4	Explosion					2	5		2	2	7	5.1	1.2
2	Failure to use protective devices provided		2								2		0.3
173	Falling - (Other than in water)	1	167			1	2		2	2	171	5.1	29.1
94	Handling materials		94								94		16.0
6	Infection from minor wounds		6								6		1.0
48	Involving use of tools - no defect		48								48		8.2
54	Miscellaneous		53				1				54		9.2
115	Striking against or stuck by object	1	114							1	114	2.6	19.4
601	TOTAL	8	544	3	3	27	35	1	6	39	588		
	Per Cent Killed	20.5		7.7		69.2		2.6				100.0	
	Per Cent Injured		92.5		0.5		6.0		1.0				100.0

K - Killed; I - Injured

TABLE NO. 15 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SERVICE UTILITIES

CLASS OF PERSON	KILLED				INJURED			
	YEAR			COMPARISON OF 1956 WITH 1955	YEAR			COMPARISON OF 1956 WITH 1955
	1954	1955	1956		1954	1955	1956	
Employees	18	12	8	- 33.3%	513	580	544	- 6.2%
Trespassers	1	5	3	- 40.0%	2	1	3	+200.0%
Others	16	14	27	+ 92.8%	33	25	35	+ 40.0%
Patrons or Consumers	3	-	1	-	13	6	6	-
TOTAL	38	31	39	+ 25.8%	561	612	588	- 3.9%

TABLE NO. 16 - ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
18	Automobile accident	1	23				1			1	24	2.9	6.2
1	Burns - not from electric source		1								1		0.3
4	Defect or failure of equipment or machinery		4								4		1.0
-	Drowning												
53	Electric - Contact with charged wires or equipment	5	11	3	3	23	20	1		32	34	94.2	8.8
-	Explosion												
1	Failure to use protective devices provided		1								1		0.3
116	Falling - (Other than in water)		114			1	1			1	115	2.9	29.6
70	Handling materials		70								70		18.0
5	Infection from minor wounds		5								5		1.3
31	Involving use of tools - no defect		31								31		8.0
33	Miscellaneous		33								33		8.5
70	Striking against or struck by objects		70								70		18.0
402	TOTAL	6	363	3	3	24	22	1	-	34	388		
	Per Cent Killed	17.7		8.8		70.6		2.9				100.0	
	Per Cent Injured		93.5		0.8		5.7						100.0

K - Killed; I - Injured

TABLE NO. 17 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING ELECTRIC SERVICE UTILITIES

YEAR	EMPLOYEES		TRES-PASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K.	I
1954	15	325	1	2	16	19	-	2	32	348
1955	10	352	5	1	13	19	-	-	28	372
1956	6	363	3	3	24	22	1	-	34	388

TABLE NO. 18 - ACCIDENTS INVOLVING GAS SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
1	Asphyxiation								2		2		2.9
2	Automobile Accident		2								2		2.9
4	Burns - not from electric source		2				2				4		5.8
1	Defect or failure of equipment or machine		1								1		1.5
-	Drowning												
-	Electric - Contact with charged wires or equipment												
4	Explosion					2	5		2	2	7	50.0	10.1
-	Failure to use protective devices provided												
14	Falling - (Other than in water)	1	12				1			1	13	25.0	18.8
12	Handling materials		12								12		17.4
1	Infection from minor wounds		1								1		1.5
9	Involving use of tools - no defect		9								9		13.0
7	Miscellaneous		7								7		10.1
12	Striking against or struck by objects	1	11							1	11	25.0	16.0
67	TOTAL	2	57	-	-	2	8	-	4	4	69		
	Per Cent Killed	50.0				50.0						100.0	
	Per Cent Injured		82.6				11.6		5.8				100.0

K - Killed; I - Injured

TABLE NO. 19 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GAS SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1954	-	72	-	-	-	3	3	7	3	82
1955	2	75	-	-	1	2	-	5	3	82
1956	2	57	-	-	2	8	-	4	4	69

TABLE NO. 20 - ACCIDENTS INVOLVING WATER SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
2	Automobile accident		1				1				2		8.3
1	Burns - not from electric source		1								1		4.2
-	Defect or failure of equipment or machines												
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
6	Falling (Other than in water)		5						1		6		25.0
1	Handling materials		1								1		4.2
-	Infection from minor wounds												
3	Involving use of tools - no defect		3								3		12.5
2	Miscellaneous		2								2		8.3
9	Striking against or struck by objects		9								9		37.5
24	TOTAL	-	22	-	-	-	1	-	1	-	24		
	Per Cent Killed												
	Per Cent Injured		91.6				4.2		4.2				100.0

K - Killed; I - Injured

TABLE NO. 21 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING WATER SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1954	1	33	-	-	-	-	-	-	1	33
1955	-	34	-	-	-	-	-	-	-	34
1956	-	22	-	-	-	1	-	1	-	24

TABLE NO. 22 - ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
15	Automobile accident		11			1	3			1	14	100.0	13.4
2	Burns - not from electric source		2								2		1.9
-	Defect or failure of equipment or machines												
-	Drowning												
1	Electric - Contact with charged wires or equipment		1								1		1.0
-	Explosion												
1	Failure to use protective devices provided		1								1		1.0
37	Falling - (Other than in water)		36						1		37		35.6
11	Handling materials		11								11		10.6
-	Infection from minor wounds												
4	Involving use of tools - no defects		4								4		3.8
11	Miscellaneous		10				1				11		10.6
23	Striking against or struck by objects		23								23		22.1
105	TOTAL	-	99	-	-	1	4	-	1	1	104		
	Per Cent Killed					100.0						100.0	
	Per Cent Injured		95.2				3.8		1.0				100.0

K - Killed; I - Injured

TABLE NO. 23 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING TELEPHONE AND TELEGRAPH SERVICE UTILITIES

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1954	2	82	-	-	-	11	-	4	2	97
1955	-	115	-	-	-	4	-	1	-	120
1956	-	99	-	-	1	4	-	1	1	104

TABLE NO. 24 - ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I
-	Asphyxiation												
-	Automobile accident												
-	Burns - not from electric source												
-	Defect or failure of equipment or machines												
-	Drowning												
-	Electric - Contact with charged wires or equipment												
-	Explosion												
-	Failure to use protective devices provided												
-	Falling - (Other than in water)												
-	Handling materials												
-	Infection from minor wounds												
1	Involving use of tools - no defects		1								1		33.3
1	Miscellaneous		1								1		33.3
1	Striking against or struck by objects		1								1		33.4
3	TOTAL	-	3	-	-	-	-	-	-	-	3		
	Per Cent Killed												
	Per Cent Injured		100.0										100.0

K - Killed; I - Injured

TABLE NO. 25 - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING OTHER SERVICE UTILITIES*

YEAR	EMPLOYEES		TRESPASSERS		OTHERS		PATRONS OR CONSUMERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I
1954	-	1	-	-	-	-	-	-	-	1
1955	-	4	-	-	-	-	-	-	-	4
1956	-	3	-	-	-	-	-	-	-	3

* - Other utilities as herein used consist of: Canal, Ferry, Pipeline and Steam Heating

TABLE NO. 26 - SUMMARY OF ALL UTILITY ACCIDENTS INVOLVING INJURIES AND FATALITIES COMPARED WITH ACCIDENTS IN 1954 and 1955

CLASS OF UTILITY	ACCIDENTS				KILLED				INJURED			
	YEAR			COMPARISON OF 1956 WITH 1955	YEAR			COMPARISON OF 1956 WITH 1955	YEAR			COMPARISON OF 1956 WITH 1955
	1954	1955	1956		1954	1955	1956		1954	1955	1956	
Steam Railroad	1409	1591	1976	+ 24.20%	96	117	120	+ 2.56%	1420	1555	1958	+ 25.92%
Street Railway	2790	2279	1455	- 36.16%	27	24	18	- 25.00%	3163	2656	1765	- 33.55%
Motor Transportation	1944	1810	1835	1.93%	30	41	42	+ 2.44%	2563	2661	2645	- 0.60%
Electric	363	388	402	+ 3.61%	32	28	34	+ 21.43%	348	372	388	4.30%
Gas	73	80	67	- 16.25%	3	3	4	+ 33.33%	82	82	69	- 15.85%
Water	34	34	24	- 29.41%	1	-	-	-	33	34	24	- 29.41%
Telephone & Telegraph	96	118	105	- 11.02%	2	-	1	-	97	120	104	- 13.33%
Other Utilities	1	4	3	- 25.00%	-	-	-	-	1	4	3	- 25.00%
TOTAL	6685*	6290*	5853*	- 6.95%	191	213	219	+ 2.82%	7672*	7466*	6922*	- 7.29%

* - Totals adjusted to eliminate duplications resulting from accidents involving two utilities.

APPENDIX

DETAILED INFORMATION PERTAINING TO ACCIDENTS AT GRADE CROSSINGS OVER STEAM RAILROAD TRACKS

TABLE A - PROTECTED AND UNPROTECTED GRADE CROSSINGS

TYPE OF CROSSING	NUMBER	PER CENT OF TOTAL CROSSINGS
Protected by signals, watchmen, etc.	2183	20.88
Protected by trainmen	1631	15.60
Total Protected	3814	36.48
Unprotected (see note)	6640	63.52
TOTAL CROSSINGS	10,454	100.00

Note: Includes all crossings marked only by fixed warning signs.

TABLE B - TYPES OF GRADE CROSSING PROTECTION

TYPE OF PROTECTION	NUMBER OF GRADE CROSSINGS PROTECTED	PER CENT OF TOTAL PROTECTED CROSSINGS
Gates	299	7.84
Watchmen	181	4.74
Flashing light signals	1566*	41.06
Other visual signals	38**	1.00
Bells	99	2.60
Trainmen	1631	42.76
TOTAL	3814	100.00

* - Additional protection by short-arm gates at 253 crossings.
**- Includes 17 crossings protected by traffic lights.

TABLE C - GRADE CROSSING ACCIDENTS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis Trolleys, Wagons, Sleds, etc.		TOTAL ACCIDENTS			PER CENT OF TOTAL ACCIDENTS
	NC	C	NC	C	NC	C	NC	C	TOTAL	
Unprotected*	159	66		1	1		160	67	227	50.67
Protected by gates	15	5		1			15	6	21	4.69
Protected by watchmen	15	4		1			15	5	20	4.46
Protected by bells	4						4		4	0.89
Protected by visual signals	81	43		4	1		82	47	129	28.80
Protected by trainmen	30	16				1	30	17	47	10.49
Total Accidents at Protected Crossings	145	68		6	1	1	146	75	221	49.33
Total Accidents--Non Casualty	304				2		306			68.30
Total Accidents--Casualty		134		7		1		142		31.70
TOTAL ACCIDENTS	438		7		3				448	
Per Cent of Total Accidents	97.77		1.56		0.67					100.00

NC - Non Casualty; C - Casualty

*See "Note" Page 16 under Table A

TABLE D - PERSONS KILLED AND INJURED AT GRADE CROSSINGS ON STEAM RAILROADS

CROSSING	Autos and Auto Trucks		Pedes-trians		Buses, Taxis, Trolleys, Wagons, Sleds, etc.		TOTAL CASUALTIES			PER CENT OF TOTAL K AND I
	K	I	K	I	K	I	K	I	TOTAL	
Unprotected*	20	78	1				21	78	99	49.01
Protected by gates	2	7	1				3	7	10	4.95
Protected by watchmen	2	6		1			2	7	9	4.46
Protected by bells										
Protected by visual signals	17	42	4				21	42	63	31.19
Protected by trainmen	1	19				1	1	20	21	10.39
TOTAL	42	152	6	1		1	48	154	202	100.00
Killed and Injured at protected crossings	22	74	5	1		1	27	76	103	50.99
Per Cent of Total Killed & Injured	96.04		3.47		0.49					100.00

K - Killed; I - Injured

* See "Note" Page 16 under Table A

TABLE E - CASUALTIES AT PROTECTED AND UNPROTECTED GRADE CROSSINGS
1954, 1955 and 1956

TYPE OF CROSSING	YEAR	NUMBER OF CROSSINGS	KILLED	CASUALTIES - PER CENT VARIATION FROM PREVIOUS YEAR	
				Decrease	Increase
*PROTECTED	1954	2178	13	23.5	
	1955	2176	14		7.7
	1956	2183	26		85.7
**UNPROTECTED	1954	8379	18	42.0	
	1955	8342	21		16.7
	1956	8271	22		4.7
			INJURED		
*PROTECTED	1954	2178	33	36.6	
	1955	2176	47		42.4
	1956	2183	56		19.1
**UNPROTECTED	1954	8379	92	7.1	
	1955	8342	74	19.6	
	1956	8271	98		32.4

* - Not including those protected by trainmen.

** - Includes those protected by trainmen and those marked only by fixed warning signs.

TABLE F - CHARACTER OF LOCATION WHERE GRADE CROSSING ACCIDENTS OCCURRED
1954, 1955 and 1956

CHARACTER OF LOCATION	TYPE OF CROSSING	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS		KILLED		INJURED	
			NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR	NUMBER	COMPARISON WITH PREVIOUS YEAR
URBAN*	PROTECTED	1954	126	-16.6%	12	-14.3%	28	-37.7%
		1955	134	+ 6.3%	11	-8.5%	47	+67.9%
		1956	142	+ 6.0%	13	+18.2%	51	+ 8.5%
	UNPROTECTED**	1954	109	+12.4%	3	+50.0%	36	+28.6%
		1955	102	-6.4%	8	+166.7%	26	-27.8%
		1956	93	-8.8%	5	-37.5%	24	-7.8%
RURAL	PROTECTED	1954	57	-16.2%	4	-	12	-14.3%
		1955	50	-12.3%	5	+25.0%	9	-25.0%
		1956	79	+58.0%	14	+180.0%	25	+177.7%
	UNPROTECTED**	1954	114	-21.9%	12	-57.1%	49	-23.4%
		1955	152	+33.3%	11	-8.5%	39	-20.4%
		1956	134	-11.8%	16	+45.5%	54	+38.4%

* - Cities or boroughs with population over 2,500.
** - See "Note" Page 16 under Table A.

TABLE G - PERIOD OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED
1954, 1955 and 1956

PERIOD OF DAY	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
DAYLIGHT	1954	217	6.9	
	1955	236		8.7
	1956	251		6.3
		PERSONS KILLED		
	1954	27	25.0	
	1955	19	29.6	
	1956	33		73.7
		PERSONS INJURED		
	1954	63	11.3	
	1955	63	-	-
	1956	87		38.1
DARKNESS		CASUALTY AND NON-CASUALTY ACCIDENTS		
	1954	189	17.5	
	1955	202		6.9
	1956	197	2.5	
		PERSONS KILLED		
	1954	4	66.7	
	1955	16		300.0
	1956	15	6.2	
		PERSONS INJURED		
	1954	62	22.5	
	1955	58	6.4	
	1956	67		15.5

TABLE H

HOUR OF DAY WHEN GRADE CROSSING ACCIDENTS OCCURRED

HOUR	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Midnight to 12:59 a.m.	8	1.79		5
1 to 1:59 a.m.	10	2.23		5
2 to 2:59 a.m.	13	2.90	1	4
3 to 3:59 a.m.	14	3.13	2	5
4 to 4:59 a.m.	5	1.12		3
5 to 5:59 a.m.	11	2.46		3
6 to 6:59 a.m.	18	4.02	2	8
7 to 7:59 a.m.	8	1.79		2
8 to 8:59 a.m.	17	3.79	1	3
9 to 9:59 a.m.	19	4.24	1	9
10 to 10:59 a.m.	26	5.80		10
11 to 11:59 a.m.	20	4.46	5	8
Noon to 12:59 p.m.	17	3.79	1	2
1 to 1:59 p.m.	22	4.91	7	4
2 to 2:59 p.m.	22	4.91	3	16
3 to 3:59 p.m.	25	5.58	8	10
4 to 4:59 p.m.	24	5.36	3	8
5 to 5:59 p.m.	24	5.36	2	3
6 to 6:59 p.m.	27	6.03	1	8
7 to 7:59 p.m.	33	7.37	1	9
8 to 8:59 p.m.	32	7.14	2	8
9 to 9:59 p.m.	16	3.57	5	9
10 to 10:59 p.m.	17	3.79	1	4
11 to 11:59 p.m.	20	4.46	2	8
Not Reported				
TOTAL	448	100.00	48	154

TABLE I

DAY OF WEEK WHEN GRADE CROSSING ACCIDENTS OCCURRED

DAY	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
Sunday	49	10.94	4	12
Monday	58	12.94	2	20
Tuesday	61	13.62	13	22
Wednesday	66	14.73	1	27
Thursday	74	16.52	8	22
Friday	71	15.85	4	23
Saturday	69	15.40	16	28
TOTAL	448	100.00	48	154

TABLE J

MONTH OF YEAR WHEN GRADE CROSSING ACCIDENTS OCCURRED

MONTH	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL	KILLED	INJURED
January	63	14.06	10	19
February	54	12.05	3	12
March	34	7.60	3	9
April	29	6.47	3	11
May	23	5.13	3	6
June	34	7.60	4	18
July	23	5.13	1	6
August	29	6.47	4	12
September	35	7.81	4	16
October	35	7.81	4	11
November	42	9.38	6	21
December	47	10.49	3	13
TOTAL	448	100.00	48	154

TABLE K - CHARACTER OF TRACK WHERE GRADE CROSSING ACCIDENTS OCCURRED
1954, 1955 and 1956

CHARACTER OF TRACK	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Main Line	1954	377	31	120
	1955	394	33	117
	1956	402	48	134
Public Siding*	1954	26	-	5
	1955	29	-	4
	1956	37	-	13
Private Siding	1954	3	-	-
	1955	15	2	-
	1956	9	-	7
Private Grade Crossing (Private Road)	1954	52	5	15
	1955	58	5	9
	1956	38	3	13

TABLE L - CASUALTIES RESULTING FROM ACCIDENTS INVOLVING CONTACT WITH TRAINS
1954, 1955 and 1956

CONTACT BETWEEN TRAIN AND	YEAR	NUMBER OF CASUALTY ACCIDENTS	KILLED	INJURED
Automobiles and Autotrucks	1954	87	21	119
	1955	104	34	112
	1956	134	42	152
Pedestrians	1954	11	9	2
	1955	8	1	7
	1956	7	6	1
Streetcars Autobuses Taxicabs	1954	2	-	3
	1955	-	-	-
	1956	1	-	-
Bicycles Motorcycles Wagons	1954	2	1	1
	1955	2	-	2
	1956	2	-	1

TABLE M - ACCIDENTS INVOLVING VEHICLES AT UNPROTECTED AND PROTECTED PUBLIC GRADE CROSSINGS RESULTING IN NO CASUALTIES
1954, 1955 and 1956

CHARACTER OF CROSSING	YEAR	NUMBER OF ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
*Unprotected	1954	163	1.8	
	1955	192		17.8
	1956	160	16.7	
Protected	1954	141	16.1	
	1955	132	6.4	
	1956	146		10.6

* - See "Note" Page 16.

TABLE N - DETAILED ANALYSIS OF CASUALTIES AND ACCIDENTS INVOLVING AUTOMOBILES AT GRADE CROSSINGS

TYPE OF ACCIDENT	KILLED	INJURED	CASUALTY AND NON-CASUALTY ACCIDENTS	PER CENT OF TOTAL ACCIDENTS
At Crossings Protected by Gates - Contact with Train				
Auto driven through lowered gates into side of engine or train moving over crossing	-	-	2	0.30
Auto driven through lowered gates into side of engine or train standing on crossing	-	-	-	
Auto driven through lowered gates and struck by engine or train	-	-	-	
Auto stalled on crossing and struck by engine or train	-	1	10	1.50
Auto struck by engine or train - gates not lowered	-	4	6	0.90
Auto struck by engine or train - gates out of order	2	2	2	0.30
At Crossings Other Than Those Protected by Gates - Contact with Train				
Auto in motion and struck by engine or train	35	95	269	40.27
Auto driven into side of engine or train moving over crossing	3	39	94	14.07
Auto driven into side of engine or train standing on crossing	1	1	7	1.05
Auto stalled on crossing and struck by engine or train	1	10	49	7.33
Total Accidents Involving Contact between Train and Auto	42	152	439	65.72
Auto colliding with crossing gates - No contact with train	-	-	176	26.35
Auto colliding with flashing light signal installations-No contact with train	4	1	53	7.93
Total Accidents Involving Automobiles at Grade Crossings	46	153	668	100.00

TABLE O - DETAILS OF TRAIN MOVEMENTS WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF TRAIN MOVEMENT	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Passenger train - normal movement	37	18	13	12	12.09
Passenger train - reverse movement					
Freight train - normal movement	204	97	30	113	66.67
Freight train - reverse movement	3				.98
Freight train - car ahead of engine	2				.65
Switching movement - engine normal ahead of draft	26	3	1	3	8.50
Switching movement - engine reverse ahead of draft	1	3		4	.33
Switching movement - engine pushing cars	2	1		1	.65
Light engine - normal movement	24	20	4	21	7.84
Light engine - reverse movement	1				.33
Motor track cars	6				1.96
Cars not attached					
TOTAL	306	142	48	154	100.00

TABLE P - ACCIDENTS AND CASUALTIES INVOLVING AUTOMOBILES AT PROTECTED GRADE CROSSINGS 1954, 1955 and 1956

TYPE OF PROTECTION	NUMBER OF CROSSINGS PROTECTED	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	RATIO ACCIDENTS PER CROSSING	KILLED	INJURED
Gates	333	1954	267*	0.802	-	4
	317	1955	221*	0.697	-	8
	299	1956	197*	0.659	3	7
Watchman	205	1954	19	0.093	2	-
	200	1955	26	0.130	6	15
	181	1956	22	0.122	2	6
Bells	99	1954	6	0.061	-	-
	102	1955	5	0.049	-	2
	99	1956	4	0.040	-	-
Visual Signals	1541	1954	152*	0.099	4	30
	1557	1955	138*	0.089	7	20
	1604	1956	177*	0.110	21	43
Trainmen	1594	1954	31	0.019	2	7
	1630	1955	31	0.019	2	9
	1631	1956	47	0.029	1	20

* - Including accidents not involving contact with trains.

TABLE Q - CASUALTY AND NON-CASUALTY ACCIDENTS INVOLVING CONTACT WITH TRAINS AT GRADE CROSSINGS PROTECTED BY GATES

CAUSE	YEAR	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED
Gates not lowered in time to prevent accident	1954	6	-	3
	1955	5	-	2
	1956	6	-	4
Gates out of order	1954	-	-	-
	1955	2	-	-
	1956	2	2	2
Persons passing under or around lowered gates	1954	1	1	-
	1955	2	-	2
	1956	1	1	-
Automobile driven through lowered gates striking or being struck by train	1954	3	-	1
	1955	5	-	2
	1956	2	-	-
Unassigned	1954	11	-	-
	1955	4	-	2
	1956	10	-	1

TABLE R - CROSSING GATES AND FLASHING LIGHT SIGNALS STRUCK AND DAMAGED BY AUTOMOBILES
(No contact with engine or train)
1954, 1955 and 1956

PROTECTION	YEAR	ACCIDENTS	PER CENT VARIATION FROM PREVIOUS YEAR	
			DECREASE	INCREASE
Gates struck and damaged	1954	245	3.2	
	1955	202	17.5	
	1956	176	12.9	
Flashing light signals struck and damaged	1954	50		
	1955	36	28.0	
	1956	53		42.9
				47.2

TABLE S - ACCIDENTS AND CASUALTIES OCCURRING DURING TIME CROSSINGS WERE UNPROTECTED AT PUBLIC GRADE CROSSINGS NORMALLY PROTECTED PART-TIME BY WATCHMEN OR GATES
1947 - 1956

YEAR	ACCIDENTS	PERSONS	
		KILLED	INJURED
1947	47	1	12
1948	29	1	11
1949	24	-	1
1950	23	-	8
1951	27	4	4
1952	20	-	8
1953	13	1	5
1954	10	-	2
1955	8	-	2
1956	4	-	-

TABLE T - CONDITION OF WEATHER WHERE GRADE CROSSING ACCIDENTS OCCURRED

TYPE OF WEATHER	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Clear	185	94	39	97	62.28
Cloudy	96	36	8	41	29.46
Fog	10	6	-	10	3.57
Rain	7	4	1	3	2.46
Snow	8	2		3	2.23
TOTAL	306	142	48	154	100.00

TABLE U
SPEED OF TRAINS WHERE GRADE CROSSING ACCIDENTS OCCURRED

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Standing	5	2	1	1	1.56
1 - 5	99	23	1	27	27.23
6 -10	59	16		28	16.74
11 -20	65	32	10	38	21.65
21 -30	31	34	14	36	14.51
31 -40	29	22	6	19	11.38
41 -50	11	9	13	4	4.47
51 -60	1	2	1	1	0.67
61 -70	1				0.22
Over 70		2	2		0.45
Not Reported	5				1.12
TOTAL	306	142	48	154	100.00

TABLE V
ROAD CONDITIONS WHERE GRADE CROSSING ACCIDENTS OCCURRED
(Vehicles only)

	NON-CASUALTY ACCIDENTS	CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Dry	207	95	36	102	68.48
Wet	56	26	3	36	18.59
Muddy					
Snowy	15	7	1	9	4.99
Icy	13	4	1	4	3.86
Not Reported	15	3	1	2	4.08
TOTAL	306	135	42	153	100.00

TABLE W
AGE OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Under 20	50	5	21	11.34
21 - 30	63	2	30	14.29
31 - 40	59	11	24	13.38
41 - 50	45	4	18	10.20
51 - 60	29	7	14	6.57
Over 60	34	12	16	7.71
Not Reported	161	1	30	36.51
TOTAL	441	42	153	100.00

TABLE X
SEX OF DRIVER OF VEHICLES INVOLVED IN GRADE CROSSING ACCIDENTS

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Male	360	38	123	81.63
Female	65	4	30	14.74
Not Reported	16			3.63
TOTAL	441	42	153	100.00

TABLE Y
FAMILIARITY OF DRIVER OF VEHICLES WITH GRADE CROSSING WHERE ACCIDENTS OCCURRED

	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS KILLED	PERSONS INJURED	PER CENT OF TOTAL ACCIDENTS
Familiar	294	27	105	66.67
Not Familiar	7			1.59
Not Reported	140	15	48	31.74
TOTAL	441	42	153	100.00

TABLE Z

ACCIDENTS AND CASUALTIES OF GRADE CROSSING ACCIDENTS BY COUNTIES

COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Adams	3			0.67
Allegheny	50	3	12	11.16
Armstrong	6	1	2	1.34
Beaver	3	1		0.67
Bedford	2			0.44
Berks	4		1	0.89
Blair	5			1.12
Bradford	2	2		0.44
Bucks	5	1	2	1.12
Butler	2	2		0.44
Cambria	10		7	2.23
Cameron	3	1		0.67
Carbon				
Centre	3	1		0.67
Chester	6	1	1	1.34
Clarion	4	2	2	0.89
Clearfield	15			3.35
Clinton	6	1	4	1.34
Columbia	6	1	2	1.34
Crawford	8	3	7	1.79
Cumberland	5	1	1	1.12
Dauphin	3	2	2	0.67
Delaware	14	6	5	3.13
Elk	3			0.67
Erie	25	3	5	5.58
Fayette	21		6	4.69
Forest				
Franklin	8		6	1.79
Fulton				
Greene				
Huntingdon				
Indiana	8		2	1.79
Jefferson	2			0.44
Juniata				

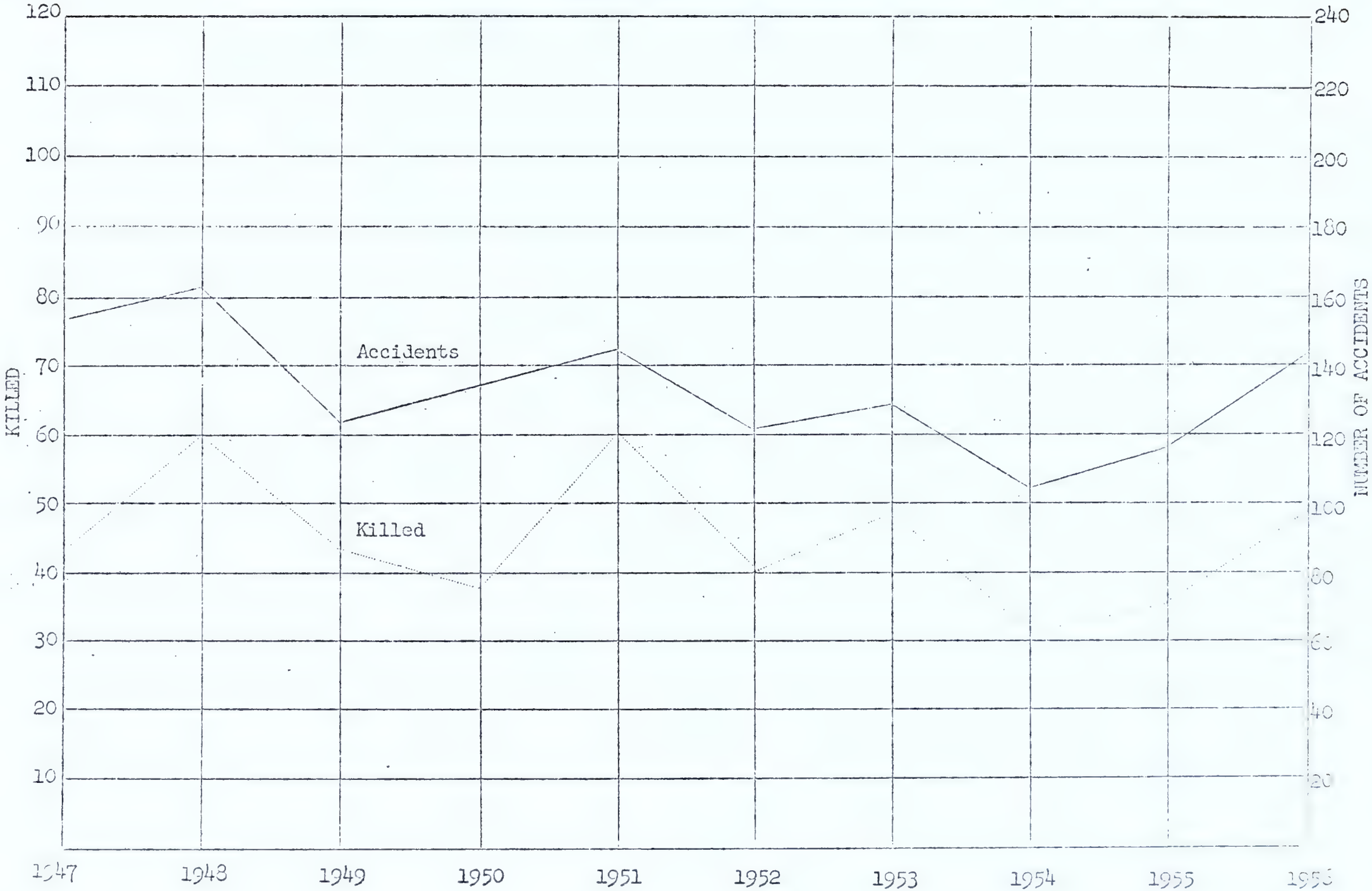
COUNTY	CASUALTY AND NON-CASUALTY ACCIDENTS	KILLED	INJURED	PER CENT OF TOTAL ACCIDENTS
Lackawanna	5			1.12
Lancaster	6		3	1.34
Lawrence	4		3	0.89
Lebanon	6		3	1.34
Lehigh	12	1	9	2.68
Luzerne	15	1	5	3.35
Lycoming	9	2	2	2.01
McKean	5		2	1.12
Mercer	14	1	6	3.13
Mifflin	2			0.44
Monroe				
Montgomery	20		15	4.46
Montour				
Northampton	5	5		1.12
Northumberland	19		5	4.24
Perry				
Philadelphia	18		6	4.02
Pike				
Potter	1			0.22
Schuylkill	13		1	2.90
Snyder				
Somerset	7		1	1.57
Sullivan				
Susquehanna	2		1	0.44
Tioga	5		2	1.12
Union	2		2	0.44
Venango	4	1	4	0.89
Warren	4		4	0.89
Washington	10	3	6	2.23
Wayne	1			0.22
Westmoreland	14	1	6	3.13
Wyoming	2		1	0.44
York	11	1		2.46
TOTAL	448	48	154	100.00

TABLE AA
GRADE CROSSING ACCIDENTS COMPARED
WITH MOTOR VEHICLE REGISTRATIONS
1947 - 1956

YEAR	NUMBER OF CROSSINGS	CASUALTY AND NON-CASUALTY ACCIDENTS	PERSONS		MOTOR VEHICLES REGISTERED*	ACCIDENTS PER 10,000 REGISTRATIONS
			KILLED	INJURED		
1947	10,977	613	45	177	2,526,577	2.43
1948	10,940	645	60	191	2,717,515	2.37
1949	10,877	489	44	156	2,899,953	1.69
1950	10,854	550	38	157	3,173,369	1.73
1951	10,812	570	61	149	3,338,059	1.71
1952	10,773	485	40	176	3,409,844	1.42
1953	10,629	462	48	151	3,455,695	1.34
1954	10,557	406	31	125	3,564,318	1.14
1955	10,518	438	35	121	3,778,734	1.16
1956	10,454	448	48	154	3,936,586	1.14

* - Figures from Pennsylvania Department of Revenue, Bureau of Motor Vehicles.
(Not including trailer registrations)

TABLE BB - CHART SHOWING CASUALTY ACCIDENTS AND NUMBER OF FATALITIES AT GRADE CROSSING OVER STEAM RAILROADS IN PENNSYLVANIA 1947 - 1956



DETAILED INFORMATION PERTAINING TO ACCIDENTS INVOLVING REGULATED MOTOR TRANSPORTATION

TABLE NO. I - ACCIDENTS INVOLVING CALL & DEMAND SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
584	Collision with other vehicle		12	1	647				7	1	324			2	990	40.00	87.84
3	Collision with fixed object	1			1				1					1	2	20.00	0.18
106	Struck by taxicab				11			2	93				7	2	111	40.00	9.85
4	Running or walking into side of taxicab								4						4		0.35
1	Boarding or alighting (Standing vehicle)				1										1		0.09
-	Falling within vehicle																
6	Caught by vehicle doors				6										6		0.53
1	Jumping on or off vehicle in motion				1										1		0.09
6	Sudden stop of vehicle				8				1						9		0.80
-	Defect or failure of equipment																
2	Vehicle skidded				2										2		0.18
-	Highway defect																
-	Apparent Reckless operating of vehicle																
1	Miscellaneous				1										1		0.09
714	TOTAL	1	12	1	678	-	-	2	106	1	324	-	7	5	1127		
	Per Cent Killed	20.00		20.00				40.00		20.00						100.00	
	Per Cent Injured		1.06		60.16				9.41		28.75		0.62				100.00

K - Killed; I - Injured

TABLE NO. II - ACCIDENTS INVOLVING SCHEDULED BUS SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENTS	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
323	Collision with other vehicle		27		322				4	9	299			9	652	64.29	48.66
9	Collision with fixed object		1		22										23		1.72
97	Struck by autobus				1			4	90			1	3	5	94	35.71	7.01
23	Running or walking into side of autobus								23						23		1.72
211	Boarding or alighting (Standing vehicle)		3		211										214		15.97
91	Falling within vehicle				92										92		6.87
58	Caught by vehicle doors				58										58		4.33
3	Jumping on or off vehicle in motion				1		2								3		0.22
133	Sudden stop of vehicle				137										137		10.22
3	Defect or failure of equipment				3										3		0.22
3	Vehicle skidded		1		2										3		0.22
2	Highway defect		1		1										2		0.15
-	Apparent reckless operation of vehicle																
35	Miscellaneous		20		15								1		36		2.69
991	TOTAL	-	53	-	865	-	2	4	117	9	299	1	4	14	1340		
	Per Cent Killed							28.57		64.29		7.14				100.00	
	Per Cent Injured		3.96		64.55		0.15		8.73		22.31		0.30				100.00

K - Killed; I - Injured

TABLE NO. III - ACCIDENTS INVOLVING GROUP & PARTY SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
2	Collision with other vehicle				11					4	2			4	13	100.00	48.15
-	Collision with fixed object																
-	Struck by autobus																
-	Running or walking into side of autobus																
1	Boarding or alighting (Standing vehicle)				1										1		3.70
1	Falling within vehicle				1										1		3.70
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
1	Vehicle skidded		1		11										12		44.45
-	Highway defect																
-	Apparent reckless operation of vehicle																
-	Miscellaneous																
5	TOTAL	-	1	-	24	-	-	-	-	4	2	-	-	4	27		
	Per Cent Killed									100.0						100.00	
	Per Cent Injured		3.70		88.89						7.41						100.00

K - Killed; I - Injured

TABLE NO. IV - ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
84	Collision with other vehicles	1	10		1					11	101			12	112	70.58	86.82
4	Collision with fixed object		4												4		3.10
7	Struck by truck	2							4				1	2	5	11.77	3.87
-	Running or walking into side of truck																
2	Boarding or alighting (Standing vehicle)		1		1										2		1.55
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
1	Sudden stop of vehicle		1												1		.78
1	Defect or failure of equipment	1												1		5.88	
2	Vehicle skidded		2												2		1.55
-	Highway defect																
-	Apparent reckless operation of vehicle																
5	Miscellaneous	2	3											2	3	11.17	2.33
106	TOTAL	6	21	-	2	-	-	-	4	11	101	-	1	17	129		
	Per Cent Killed	35.29								64.71						100.00	
	Per Cent Injured		16.28		1.55				3.10		78.29		0.78				100.00

K - Killed; I - Injured

TABLE NO. V - ACCIDENTS INVOLVING CONTRACT
CARRIER SERVICE IN REGULATED MOTOR TRANSPORTATION

NUMBER OF ACCIDENTS	CAUSE OR NATURE OF ACCIDENT	EMPLOYEES		PASSEN-GERS		TRES-PASSERS		PEDES-TRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL		PER CENT	
		K	I	K	I	K	I	K	I	K	I	K	I	K	I	K	I
18	Collision with other vehicle	1	4		2					1	15			2	21	100.00	95.45
1	Collision with fixed object		1												1		4.55
-	Struck by taxicab, autobus or truck																
-	Running or walking into side of taxicab, autobus or truck																
-	Boarding or alighting (Standing vehicle)																
-	Falling within vehicle																
-	Caught by vehicle doors																
-	Jumping on or off vehicle in motion																
-	Sudden stop of vehicle																
-	Defect or failure of equipment																
-	Vehicle skidded																
-	Highway defect																
-	Apparent reckless operation of vehicle																
-	Miscellaneous																
19	TOTAL	1	5	-	2	-	-	-	-	1	15	-	-	2	22		
	Per Cent Killed	50.00								50.00						100.00	
	Per Cent Injured		22.73		9.09						68.18						100.00

K - Killed; I - Injured

TABLE NO. VI - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING CALL AND DEMAND SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1954	-	166	2	722	-	-	2	133	-	218	-	15	4	1254
1955	1	98	2	799	-	-	3	132	-	379	-	8	6	1416
1956	1	12	1	678			2	106	1	324	-	7	5	1127

TABLE NO. VII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING SCHEDULE BUS SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1954	1	51	1	788	-	2	8	80	1	215	1	8	12	1144
1955	-	37	-	759	-	1	3	65	5	225	2	8	10	1095
1956	-	53		865	-	2	4	117	9	299	1	4	14	1340

TABLE NO. VIII - COMPARISON OF PERSONS KILLED AND INJURED IN ACCIDENTS INVOLVING GROUP AND PARTY SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1954	-	-	-	4	-	-	1	1	-	3	-	-	1	8
1955	-	1	-	1	-	-	-	1	-	2	-	-	-	5
1956	-	1	-	24	-	-	-	-	4	2	-	-	4	27

K - Killed; I - Injured

TABLE NO. IX
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING FREIGHT AND MERCHANDISE SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1954	3	19	-	2	-	-	-	13	10	86	-	3	13	123
1955	3	12	-	2	-	-	-	7	19	96	-	3	22	120
1956	6	21	-	2	-	-	-	4	11	101	-	1	17	129

TABLE NO. X
COMPARISON OF PERSONS KILLED AND INJURED
IN ACCIDENTS INVOLVING CONTRACT CARRIER SERVICE

YEAR	EMPLOYEES		PASSENGERS		TRESPASSERS		PEDESTRIANS		OCCUPANTS OF OTHER VEHICLES		OTHERS		TOTAL	
	K	I	K	I	K	I	K	I	K	I	K	I	K	I
1954	-	6	-	1	-	-	-	2	-	24	-	1	-	34
1955	-	2	-	2	-	-	1	1	1	20	1	-	3	25
1956	1	5	-	2	-	-	-	-	1	15	-	-	2	22

K - Killed; I - Injured

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